

Bonner Western Disposal Service
ILT 180 010 0068

Site

Team

Evaluation

Prioritization

**CERCLA
Report**

EPA Region 5 Records Ctr.



293055



**Illinois Environmental
Protection Agency**

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**CERCLA
Site Team Evaluation Prioritization**

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1.0 INTRODUCTION

Banner Western Disposal Services was added to CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) in January 1984. In the same month, the Illinois Environmental Protection Agency (IEPA) evaluated the site by conducting a CERCLA Preliminary Assessment. The investigation of the site continued in 1989 when Ecology & Environment conducted a CERCLA Screening Site Inspection (SSI). In 1995 Focused Site Inspection Prioritization (FSIP) activities were conducted to update the scoring of the site, since the initial evaluations were performed prior to the implementation of the revised Hazard Ranking System. This evaluation was performed by Black & Veatch, Technical Assistance Team of the U.S. EPA. Because it was found that environmental concerns still existed at the site, further investigation was conducted in the form of a Site Team Evaluation Prioritization (STEP), which is the subject of this report.

2.0 SITE INFORMATION

2.1 SITE DESCRIPTION

The Banner Western Disposal Services site is a landfill located in Rockdale, just southwest of Joliet, Illinois. The landfill occupies approximately 45 acres of a 60-acre parcel in an area of numerous active and inactive landfills. The site is bordered to the north by Mound Road, with Joliet Sand & Gravel north of the road; to the south by the Chicago, Rock Island and Pacific Railroad; to the east by Kaluzny Brothers, Inc. rendering plant; and to the west by an unnamed stream with undeveloped land beyond. Refer to Figures 2-1, 2-2 and 2-3. Inactive landfills are located north and northeast of the site, and an active landfill is located to the northwest. The area to the south of the site contains commercial and industrial properties. A few residential properties are scattered along Mound Road.

The most prominent features at the site are large stockpiles of gravel (belonging to Joliet Sand & Gravel) located along Mound Road. The landfill itself is relatively flat with the south and west borders sloping downward toward the railroad and a stream, respectively. Heavy vegetation covers most of the landfill. Low wet areas, some vegetated with reeds, are found throughout the site. In the northeast corner of the site is a pond, approximately 65 feet by 150 feet, but varying with rainfall. A tree line separates the site from the property to the east, and scattered trees exist on the western portion of the landfill. Near the west end of the site there is a slight slope, which levels off somewhat before reaching a steeper incline down toward an unnamed stream. Woodland and thick vegetation cover the slope and line the stream. The stream flows from north to south and empties into the I & M Canal, which is considered intermittent at this point.

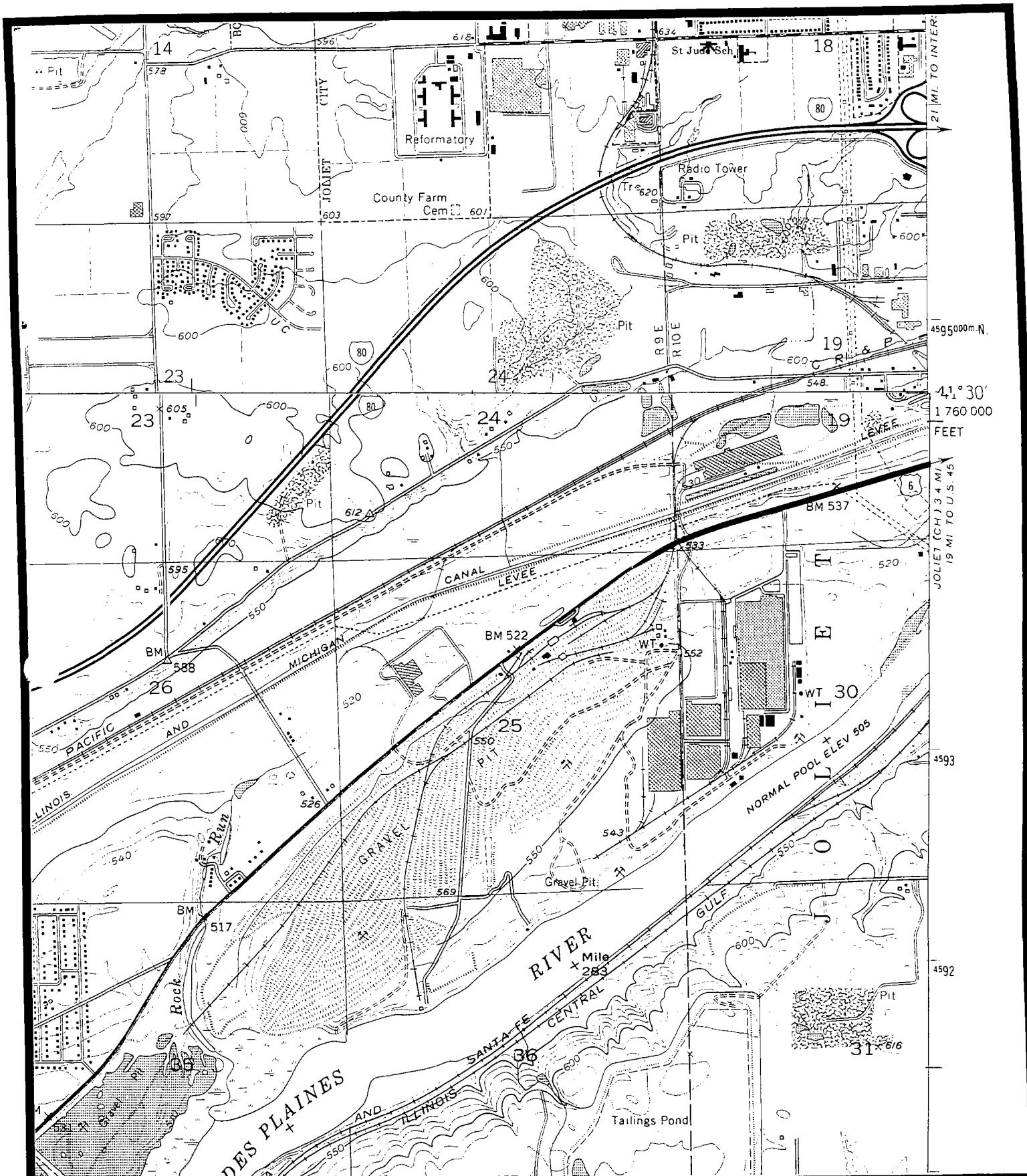
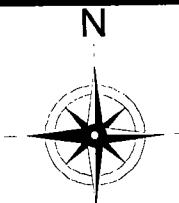


FIGURE 2-2
VICINITY MAP
Banner Western Disposal Services



Illinois Environmental
Protection Agency 1996
Base Map: USGS Topographic Maps
Scale: 1" = 2000'

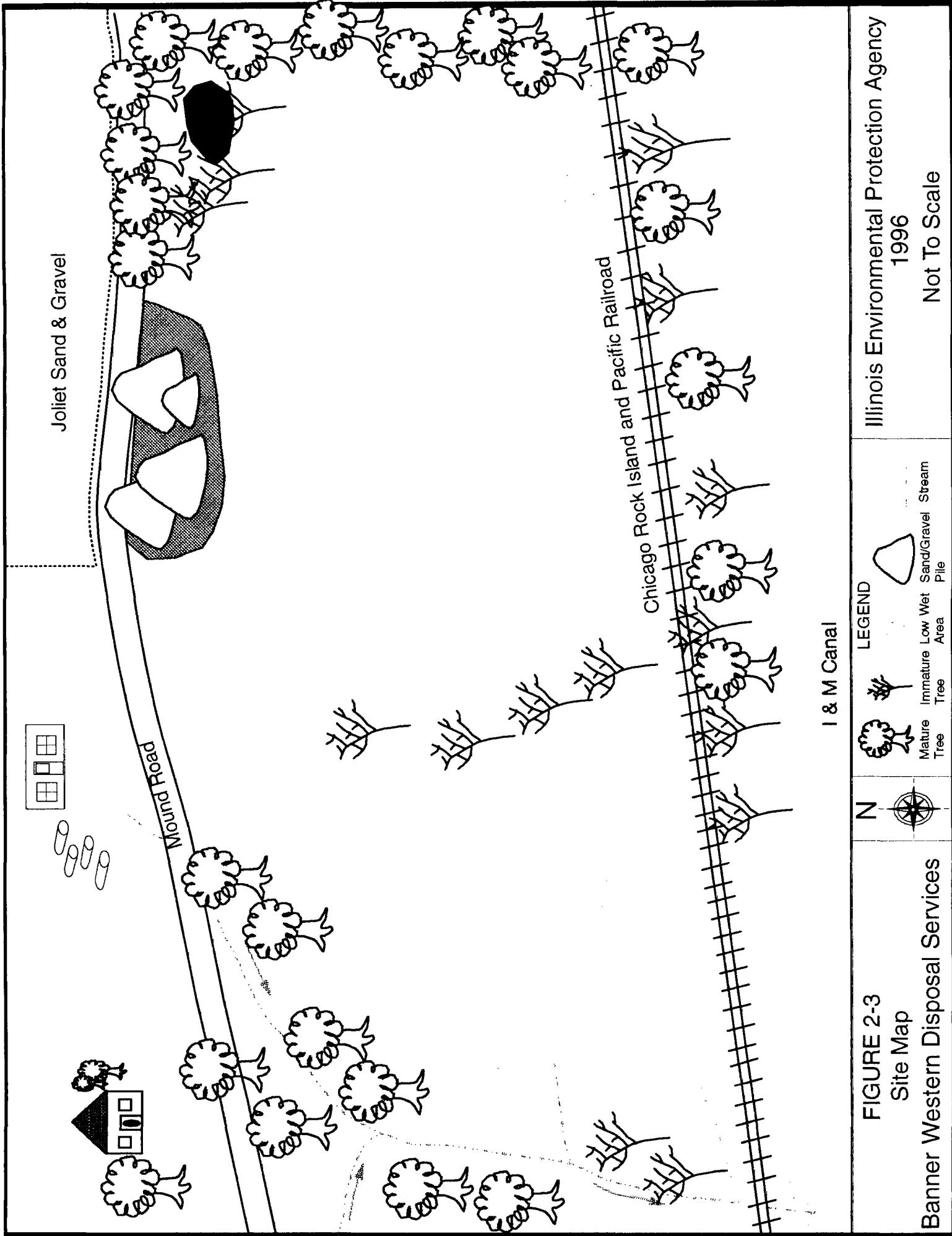


FIGURE 2-3
Site Map

Banner Western Disposal Services

2.2 SITE HISTORY

Information collected from various IEPA file documents indicates that Mrs. Anne Bennett acquired this property, along with adjoining property, in 1899. Most likely, the property was used either for agricultural purposes or was unused. Portions of the Bennett property may have been utilized for sand and/or gravel mining operations. The property, later owned by Fred D. Bennett, was leased to Banner Disposal Service of Joliet, who began landfilling operations at the site in 1968 and continued until 1971. The early operating history of the site is not clear since there was another Banner Disposal landfill located near the site. Some early state agency inspections are confusing in that it is not clear which site was being addressed. Later inspections of the site of concern indicate problems with lack of cover and leachate entering a stream that discharges to the I & M Canal. Waste Management of Illinois took over operations in 1971 and continued until October 1973. According to Benjamin Bennett, the site accepted municipal wastes from Joliet, and site inspections from 1972 and 1973 indicate that types of refuse received included demolition, putrescible, and combustible materials. No other landfilling operations are known to have occurred from this time until the landfill was declared officially closed and covered by IEPA in the fall of 1976. Since that time, the only known activity at the site has been the stockpiling of materials by Joliet Sand & Gravel. According to Benjamin Bennett, the northeast portion of the site was mined for gravel at some point in time. Aerial photographs indicate that mining operations may have extended west along Mound Road. Aerial photographs can be found in Figures 2-4, 2-5, and 2-6.

2.3 SITE REGULATORY STATUS

The Banner Western Disposal landfill began operations during the 1960s, prior to IEPA existence. However, the site did operate under Illinois Department of Public Health regulations prior to IEPA. According to IEPA file information, the landfill is considered to be closed and covered. The official closure occurred in 1976. No other regulatory implications are known.

3.0 FIELD ACTIVITIES AND ANALYTICAL RESULTS

3.1 INTRODUCTION

During the 1996 CERCLA STEP field activities 4 groundwater and 11 soil/sediment samples were collected. The sampling was conducted in accordance with the previously prepared work plan, which was reviewed by USEPA Region 5. Variations from the work plan occurred due to changes in site conditions. The work plan proposed sampling numerous seeps from the landfill. However, at the time of the field work, most of the seeps could not be located, due to dry weather and dense vegetation.

3.2 SITE RECONNAISSANCE

On June 18, 1996 a reconnaissance of the Banner Western Disposal site was conducted. This visit included a visual inspection of the site to determine site status, note predominant site characteristics, identify possible sample locations and any health and safety concerns. The landfill was found to be inactive, except for an area along Mound Road where Joliet Sand & Gravel has stockpiled materials generated from their quarrying activities. The remainder of the site was found to be generally flat and well vegetated. Numerous low, wet areas, some of which contained growths of reeds, were found throughout the site. A small pond was found near the northeast portion of the site, as described in the 1995 CERCLA Focused Site Inspection Prioritization report. During the initial site reconnaissance several leachate seeps were noted at the southeastern corner, where the landfill face slopes downward toward the railroad. During the sampling event, however, these seeps were not found, due to dry weather and thick vegetation.

Bennett said that he is considering addressing problems at the site in a voluntary fashion, although he is not ready to make a firm commitment to the IEPA's voluntary program at this time. He was informed of the July 9 and 10 sampling, with an expected two groundwater locations and approximately 10 soil sample locations to be collected. Mr. Bennett said he would probably not split these samples, and he was told he would receive a copy of the agency results. However, on July 8, 1996 Mark Cosgrove of NOVA Environmental contacted the agency to make arrangements to be present for the sampling event and to split samples for Mr. Bennett.

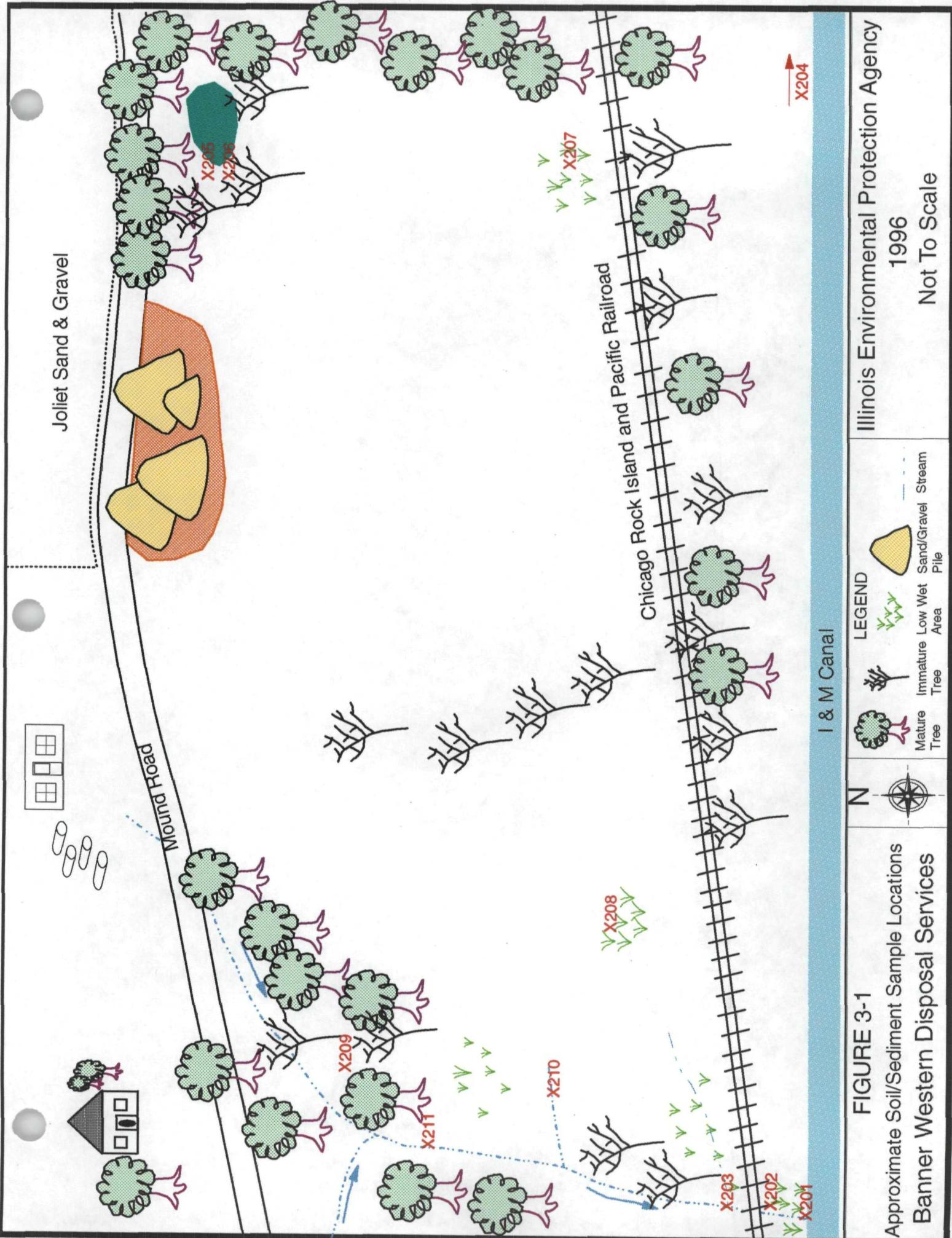
3.4 SAMPLING ACTIVITIES

On July 9 and 10, 1996 the IEPA field team collected a total of 11 soil/sediment and 4 groundwater samples. The soil/sediment samples were shipped to USEPA contract laboratories, the organic analyses being performed by American Technical and Analytical Services of Maryland Heights, Missouri, and the inorganic analyses being performed by TMA/Skinner & Sherman Laboratory of Waltham, Massachusetts. Groundwater samples were analyzed by USEPA Region 5 Central Regional Laboratory. All samples were analyzed for the entire Target Compound List, which can be found in Appendix D.

Site conditions had changed somewhat since the reconnaissance, due to dry weather and continued growth of vegetation. Many of the wet areas and leachate seeps that had been present during the reconnaissance had dried.

TABLE 3-1 SOIL /SEDIMENT SAMPLE DESCRIPTIONS
 Banner Western Disposal Service

SAMPLE	LOCATION	DEPTH	APPEARANCE
X201	Point where unnamed stream enters the I&M Canal.	0" - 4"	light gray silt with some black clay very little organic matter
X202	Point where culvert drains from east toward unnamed stream.	0" - 3"	brown silt, very little sand; mottled black & white; moist
X203	Point where southern tributary/leachate enters unnamed stream.	0" - 4"	grayish silt with some clay; quite a bit of organic matter
X204	South side of canal approx. 60' east of bridge accessing Schuller International from State Rt. 6.	0" - 8"	black-gray silt with gravel
X205/X206	Eastern edge of pond area located at northeast corner of site, near Mound Road.	0" - 3"	dark brown to black silty loam
X207	Southeast corner of site, at bottom of slope from landfill and outer berm of rendering plant lagoon; approx. 250' north of railroad tracks and 30' west of lagoon.	0" - 3"	medium brown loam
X208	Southwest portion of site, in a low area with reeds.	0" - 6"	brown moist loam with some clay and organic matter
X209	West portion of site, in wooded area approx. 20' downslope of tank protruding from slope.	0" - 3"	light to medium brown sandy silt; much vegetation in the area
X210	West side of site, upper portion of runoff/leachate stream that flows west through wooded area, into unnamed stream.	0" - 4"	light to medium brown silty loam with a little gray clay
X211	From unnamed stream downstream of house (to west) and upstream of runoff/leachate stream (X210) from landfill area.	0" - 4"	gray silt with clay



X204, the background sediment sample, was collected from the I&M Canal approximately 0.66 mile upstream of the site. The sample was taken from the south side of the canal at the Schuller International facility, and was intended to determine canal conditions upstream of the site. Sample X205 and duplicate sample X206 were collected from the western edge of the ponded water found in the northeast corner of the site. This sample was to determine whether the ponded area was contaminated. Sample X207 was collected from a low area at the southeast corner of the site. During the initial site reconnaissance, seeps from the site slope were noted running down toward this low area. This sample point is approximately 30 feet west of the rendering plant impoundment, and was collected to determine if contaminants were leaching from the landfill. Sample X208 was collected from a small area of reeds near the southwest corner of the site. During the initial site reconnaissance small seeps or streams were noted in this area and led to the southwest to the unnamed stream. This sample was collected to determine if contaminants/leachate from this portion of the site were available for migration to the unnamed stream. Sample point X209 was collected in the wooded northwest portion of the site approximately 20 feet from the tank identified during the Focused Site Inspection Prioritization. Sample X210 was collected from a leachate stream in the western part of the site. The sample was collected at a point prior to the stream entering the wooded area to determine if contaminants from the landfill were migrating to the unnamed stream. Finally, sample X211 was collected from the unnamed stream downstream of the house and upstream of the side stream coming from the east (landfill). This sample was to represent conditions upstream of the majority of the site.

3.4.2 GROUNDWATER SAMPLING

Three groundwater samples were collected from two locations, which can be seen in Figure 3-2. These samples were collected from private wells. Sample G101, believed to be upgradient of the site, was collected from a well located approximately 350 feet north of the site. A duplicate sample (G102) was also taken from this well. A sulfur smell was noticed during collection of these samples. The downgradient sample (G103) was collected from a private well located approximately 0.4 mile south of the site, on the south side of the I&M Canal. The well owner estimated the well to be 200 - 300 feet deep. This well is used as a source of drinking water. However, the owner plans to switch to the public water supply system in 1997.

Prior to collection of the samples, the water was allowed to run for at least 10 minutes. The samples were then collected directly from water spigots, which by-passed any type of filtration

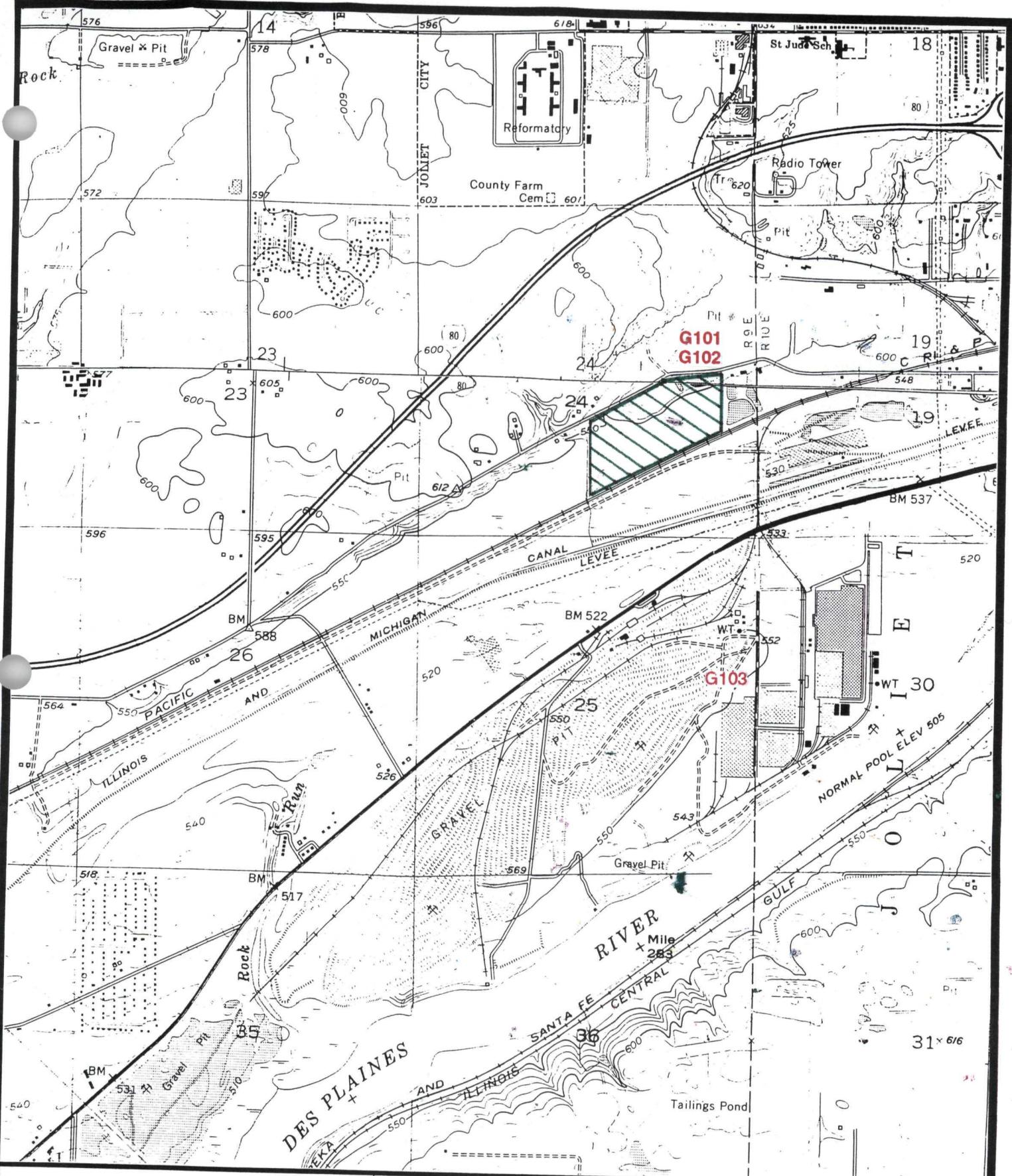


FIGURE 3-2

Groundwater Sample Locations
Banner Western Disposal Services



Illinois Environmental
Protection Agency 1996
Base Map: USGS Topographic Maps
Scale: 1" = 2000'

or treatment devices. The samples were shipped to USEPA Central Regional Laboratory in Chicago, Illinois to be analyzed under Special Analytical Services (drinking water) for the full Target Compound List (Appendix D). Although the background well is not actually used as a potable water source, the sample was analyzed as drinking water to maintain consistency with the drinking water sample.

3.5 ANALYTICAL RESULTS

Laboratory analyses of the samples collected from the landfill itself (X205 - X210), revealed low levels of volatile and semivolatile organic compounds, pesticides, polychlorinated biphenyls (PCBs), and inorganic analytes.

The stream sediment samples revealed low levels of volatile and numerous semi-volatile organic compounds, several pesticides, one polychlorinated biphenyl (PCB), and inorganic analytes.

The sediment sample collected at the confluence of the stream and the I&M Canal, X201, revealed low levels of two volatile organic compounds, one pesticide, and most of the organic analytes. In general, the background canal sample concentrations of most of the target compounds exceeded the sample X201 concentrations.

The groundwater sample G103 was found to contain low levels of cis-1,2-dichloroethene and Aroclor 1254. Various inorganic analytes were also present.

Soil/sediment sample data are presented in Table 3-2, and groundwater sample data are presented in Table 3-3.

3.6 KEY SAMPLES

Key samples are those samples with contaminant concentrations significantly above background concentrations (three times greater than background concentration, or at levels greater than or equal to the background sample detection limit for those compounds not detected in background samples). Some portion of the increased concentration must be attributable to sources at the site.

Table 3-4 (Key Sample Summary) identifies those soil/sediment samples collected during the CERCLA STEP that meet these criteria. Landfill samples X205 - X210 all have one or more contaminants at concentrations significantly above the background concentrations. Stream sediment sample X202 contains five, and X203 contains three contaminants at concentrations significantly above background concentrations. Sediment sample X201 from the confluence of the stream and the I&M Canal contained only two inorganic analytes at concentrations significantly above background.

The groundwater sample, G103, contained cadmium, chromium, and zinc at concentrations significantly above the background sample (G101) concentration. These analytes were also detected at elevated levels in landfill samples. The key groundwater samples are found in

Table 3 - 3.

TABLE 3 - 2
SOIL/SEDIMENT SAMPLE SUMMARY
Banner Western Disposal Services Landfill

Sample	X204 MEAPT7 EBHK5	X201 MEAPT4 EBHK2	X211 MEAPV4 EBHK8	X202 MEAPT5 EBHK3	X203 MEAPT6 EBHK4	S9 MECZ76 EDK28	X205 MEAPT8 EBHK6	X206 MEAPT9 EBHK7	X207 MEAPW0 EBHK8	X208 MEAPW1 EBHK9	X209 MEAPW2 EBHL0	X210 MEAPW3 EBHL7
Parameters	Canal Backgrd.	Stream Bkgd.	Stream Bkgd.	Stream Bkgd.	Stream Bkgd.	Soil Backgrd.	Soil Backgrd.	Soil Backgrd.	Soil Backgrd.	Soil Backgrd.	Soil Backgrd.	Soil Backgrd.
Volatile ($\mu\text{g}/\text{KG}$)												
Chloroethane	17 U	-	14 U	-	-	13 U	-	-	-	-	-	-
1,1-Dichloroethene	17 U	-	14 U	-	-	7 U	-	-	-	-	-	-
Acetone	30	13	14 U	-	5 J	13 U	-	-	-	-	-	-
Carbon disulfide	17 U	-	14 U	-	-	7 U	-	-	-	-	-	-
Methylene chloride	12 J	12 J	13 J	-	-	7 U	-	-	-	-	-	-
Toluene	17 U	-	14 U	-	-	7 U	-	-	-	-	-	-
Ethylbenzene	17 U	-	14 U	-	-	7 U	-	-	-	-	-	-
Xylene (Total)	17 U	-	14 U	-	-	7 U	-	-	-	-	-	-
Semi-volatiles ($\mu\text{g}/\text{KG}$)												
Phenol	570 U	-	470 U	-	-	430 U	-	-	-	-	-	-
1,4-Dichlorobenzene	40 J	-	470 U	-	-	35 J	-	-	-	-	-	-
2,4-Dimethylphenol	570 U	-	470 U	-	29 J	34 J	-	-	-	-	-	-
Naphthalene	570 U	-	470 U	-	-	33 J	-	-	-	-	-	-
2-Methylnaphthalene	34 J	-	470 U	-	-	29 J	-	-	-	-	-	-
Acenaphthylene	34 J	-	470 U	-	-	430 U	-	-	-	-	-	-
Acenaphthene	48	-	470 U	-	-	51 J	-	-	-	-	-	-
Dibenzofuran	570 U	-	470 U	-	-	43 J	-	-	-	-	-	-
2,4-Dinitrotoluene	570 U	-	470 U	-	25 J	31 J	-	-	-	-	-	-
Diethylphthalate	1400 U	-	1200 U	-	-	110 J	-	-	-	-	-	-
Pentachlorophenol	68 J	-	470 U	-	-	160 J	-	-	-	-	-	-
Fluorene	380 J	-	43 J	180 J	-	430 U	-	-	-	-	-	-
Phenanthrene	200 J	-	470 U	37 J	40 J	430 U	-	-	-	-	-	-
Anthracene	570 U	-	45 J	38 J	44 J	430 U	-	-	-	-	-	-
Di-n-butylphthalate	1500	-	74 J	320 J	260 J	45 J	220 J	250 J	350 J	570	360 J	60 J
Fluoranthene	1600	-	78 J	380 J	500 J	50 J	240 J	280 J	460 J	550	500	100 J
Pyrene	570 U	-	76 J	44 J	71 J	430 U	-	-	-	-	-	-
Butylbenzylphthalate	570 U	-	470 U	-	100 J	100 J	-	-	-	-	-	-
Carbazole	570 U	-	210 J	180 J	120 J	120 J	-	-	-	-	-	-
Benz(a)anthracene	740	-	32 J	320 J	260 J	180 J	180 J	180 J	290 J	400 J	410 J	66 J
Chrysene	1000	-	49 J	320 J	470 U	430 U	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	4200 B	-	470 U	-	680 B	430 U	-	-	-	-	-	-
Di-n-octylphthalate	570 U	-	42 J	42 J	42 J	430 U	-	-	-	-	-	-
Benz(b)fluoranthene	920	-	310 J	240 J	140 J	430 U	-	-	-	-	-	-
Benz(k)fluoranthene	620	-	290 J	280 J	250 J	430 U	-	-	-	-	-	-
Benz(a)pyrene	820	-	470 U	200 J	160 J	430 U	-	-	-	-	-	-
Indeno(1,2,3- <i>cd</i>)pyrene	660	-	470 U	150 J	150 J	430 U	-	-	-	-	-	-
Benz(g,h,i)perylene	440 J	-	470 U	150 J	150 J	430 U	-	-	-	-	-	-

TABLE 3 - 2 (Continued)
SOIL/SEDIMENT SAMPLE SUMMARY
Banner Western Disposal Services Landfill

Sample	X204 MEAPT7 EBHK5	X201 MEAPT4 EBHK2	X211 MEAPW4 EBHL8	X202 MEAPT5 EBHK3	X203 MEAPT6 EBHK4	S9 MECZ76 EDK28	X205 MEAPT8 EBHK6	X206 MEAPT9 EBHK7	X207 MEAPW0 EBHK8	X208 MEAPW1 EBHK9	X209 MEAPW2 EBHL0	X210 MEAPW3 EBHL7
Pesticides/PCBs <i>UG/KG</i>												
Alpha-BHC	9 J	--	2.4 U	0.39 PJ	10 U	--	--	--	--	--	--	--
Dieldrin	57 U	--	0.53 J	3.1 J	2.9 PJ	21 U	3.1 PJ	1.4 PJ	0.85 PJ	--	--	--
Endosulfan II	57 U	--	4.7 U	--	4.7 U	21 U	3.3 PJ	5.9 PJ	--	--	--	--
4,4'-DDT	57 U	--	1.2 PJ	--	6.1 PJ	21 U	8.2 PJ	--	--	--	--	--
Methoxychlor	290 U	0.91 PJ	24 U	--	0.37 PJ	100 U	1.4 PJ	--	--	--	--	--
Gamma-Chlordane	29 U	--	0.37 PJ	--	0.67 PJ	100 U	--	--	--	--	--	--
Alpha-Chlordane	29 U	--	0.84 J	--	0.49 PJ	21 U	2 PJ	2.9 PJ	0.39 PJ	--	--	--
4,4'-DDE	57 U	--	4.7 U	3 J	3.7 PJ	21 U	4.2 J	4.1 PJ	0.55 PJ	--	--	--
4,4'-DDD	57 U	--	4.7 U	57	--	21 U	4.3 J	--	0.87 PJ	--	--	--
Endrin Ketone	57 U	--	47 U	--	--	100 U	--	--	--	--	--	--
Aroclor 1242	570 U	--	47 U	--	--	100 U	--	--	--	--	--	--
Aroclor 1248	210 JP	--	47 U	--	--	210 U	--	--	--	--	--	--
Aroclor 1254	570 U	--	47 U	--	--	210 U	--	--	--	--	--	--
Aroclor 1260	140 JP	--	47 U	--	--	210 U	--	--	360	--	--	--
Inorganics <i>MG/KG</i>												
Aluminum	16100 *	2080 *	5120 *	8620 *	9070 *	83300 *	12500 *	10800 *	10600 *	11200 *	5900 *	6280 *
Arsenic	4.8 *	2.6 *	8.3 *	12.2 *	6.9 *	7.7	13.2 *	14.3 *	7.9 *	16.2 *	35.6 *	11.6 *
Barium	276	8.9 B	42.5 B	61.1	45.7 B	116	123	130	89.8	101	101	111
Beryllium	0.93 B	0.28 B	0.34 B	0.55 B	0.58 B	1.6	0.8 B	0.8 B	0.62 B	0.61 B	0.29 B	0.52 B
Cadmium	0.4 B	--	--	0.95 B	--	0.66	U	3.4	3	--	32.2	2.7
Calcium	37000	155000	94300	60400	63600	5110	105000	101000	49100	49200	104000	67200
Chromium	73.6 *	5.6 *	9.5 *	17.4 *	19.6 *	5.1	35.1 *	30.8 *	29.7 *	17.7 *	97.8 *	19.2 *
Cobalt	12.8 B	2.4 B	5.1 B	13.6	10.4 B	9.1 B	13.1 B	13 B	11.2 B	12.6 B	21.6	8.3 B
Copper	121	3.7 B	9.1	24	23.6	15.5	45.6	42.7	48.8	24.5	208	38
Iron	28100	3850	13100	23500	20100	16200 *	28500	26200	24300	41200	45000	41200
Lead	65.3	2.4	10.6	21.5	21.4	25.8	59.6	61.7	59.1	21.1	146	45.1
Magnesium	21600	90400	54300	28300	29300	3420	40600	3310	18600	22800	33500	29000
Manganese	319	260	349	716	688	1010	1110	1240	480	984	547	634
Mercury	0.13 B	--	--	0.08 B	--	0.13	UN	0.16 B	0.11 B	0.16	0.42	0.1 B
Nickel	53.4	4.9 B	9.7 B	45.8	24.5	15	30.3	28.1	32.2	26.2	177	23.3
Potassium	3410	1280	1500	1720	2470	1370	2710	2290	2670	2440	1180 B	1870
Silver	--	--	--	--	1	U	--	1.5 B	--	--	2.1 B	--
Sodium	352 B	124 B	182 B	190 B	928 B	50.3 B	352 B	362 B	1760	1270 B	741 B	1030 B
Thallium	--	--	--	--	--	--	--	--	--	--	3	--
Vanadium	33.7	5 B	13 B	21	21.9	24.8	29.5	27.7	28.5	17.3	17.7	217
Zinc	357	3.6 B	39.9	729	94	68.1 *E	202	207	190	77.8	4360	217

TABLE 3 - 3
GROUNDWATER SAMPLE SUMMARY
Banner Western Disposal Services Landfill

Sample Parameters	G101 96IE26S01 Background	G102 96IE26D01 G101 Dup.	G103 96IE26S03 Downgrad.	G104 96IE26R01 Field Blank
Volatiles <i>UG/L</i>				
Chloroethane	130 D	110 D	--	--
Acetone	3 U	3 U	--	85
1,1-Dichloroethane	1	1	--	--
cis-1,2-Dichloroethene	1 U	1 U	2	--
Toluene	1 U	1 U	--	0.6 J
Semi-volatiles <i>UG/L</i>				
bis(2-Ethylhexyl)phthalate	5 U	5 U	--	3 BJ
Pesticides/PCBs <i>UG/L</i>				
Alpha-BHC	0.01	0.011	--	--
Aroclor 1254	0.15	0.13	0.25	--
Inorganics <i>UG/L</i>				
Aluminum	95.8	80 U	--	--
Arsenic	2	2 U	--	--
Barium	77.5	65.9	28.4	--
Cadmium	0.2 U	0.2 U	0.2	--
Calcium	69900	50800	86900	--
Chromium	10 U	10 U	13.4	--
Copper	185	238	68	--
Iron	909	284	245	--
Lead	6	2 U	--	--
Magnesium	37100	27100	47500	--
Manganese	108	42.7	26.5	--
Nickel	20 U	20 U	--	--
Potassium	11200	13200	--	--
Sodium	80800	99300	40600	--
Zinc	40 U	40 U	867	--

Bold/blue results are key sample results, i.e. they are three times the background concentration, and the analyte was detected in one or more source sample(s).

TABLE 3 - 4
SOIL/SEDIMENT KEY SAMPLE SUMMARY
Banner Western Disposal Services Landfill

Sample	X204 MEAPT7 EBHK5	X201 MEAPT4 EBHK2	X211 MEAPW4 EBHL8	X202 MEAPT5 EBHK3	X203 MEAPT6 EBHK4	S9 MECZ76 EDK28 Soil Backgrd.	X205 MEAPT8 EBHK6	X206 MEAPT9 EBHK7	X207 MEAPW0 EBHK8	X208 MEAPW1 EBHK9	X209 MEAPW2 EBHLO	X210 MEAPW3 EBHL7
Parameters		Canal Backgrd.										
Volatile UG/KG												
Methylene chloride	12 J	--	14 U	--	--	7 U	--	--	15 J	--	--	--
Xylene (Total)	17 U	--	14 U	--	--	7 U	--	--	--	16	17	--
Semi-volatiles UG/KG												
Fluoranthene	1500	--	74 J	--	--	45 J	--	--	--	570	--	--
Pyrene	1600	--	78 J	--	--	50 J	--	--	--	550	500	--
Chrysene	1000	--	49 J	--	--	430 U	--	--	--	490	--	--
bis(2-Ethylhexyl)phthalate	4200 B	--	470 U	--	--	430 U	--	--	--	580	500	--
Benzo(b)fluoranthene	920	--	41 J	--	--	430 U	--	--	--	480	--	--
Benzo(a)pyrene	820	--	470 U	--	--	430 U	--	--	--	500	--	--
Indeno(1,2,3-cd)pyrene	660	--	470 U	--	--	430 U	--	--	--	--	--	--
Pesticides/PCBs UG/KG												
Aroclor 1242	570 U	--	47 U	57	--	100 U	--	--	--	--	--	--
Aroclor 1248	210 JP	--	47 U	--	--	100 U	--	--	--	--	--	--
Aroclor 1260	140 JP	--	47 U	--	--	210 U	--	--	360	--	--	--
Inorganics MG/KG												
Arsenic	4.8 *	--	8.3 *	--	--	7.7	--	--	--	--	35.6 *	--
Barium	276	--	42.5 B	61.1	--	116	--	--	--	--	--	--
Cadmium	0.4 B	--	--	0.66	U	3.4	3	2.9	--	32.2	2.7	
Calcium	37000	155000	94300	--	5110	105000	101000	49100	49200	104000	67200	
Chromium	73.6 *	--	9.5 *	--	5.1	35.1 *	30.8 *	29.7 *	17.7 *	97.8 *	19.2 *	
Copper	121	--	9.1	--	15.5	--	--	48.8	--	208	--	
Iron	28100	--	13100	10.6	--	16200 *	25.8	--	--	146	--	
Lead	65.3	--	54300	--	--	3420	40600	18600	22800	33500	29000	
Magnesium	21600	90400	--	--	0.13	UN	--	0.16	--	0.42	--	
Mercury	0.13 B	--	9.7 B	45.8	15	--	--	--	--	177	--	
Nickel	53.4	--	--	24.5	--	0.48	UNW	--	--	3	--	
Thallium	--	--	13 B	21	21.9	24.8	--	--	--	--	--	
Vanadium	33.7	--	39.9	729	--	68.1 *E	202	207	190	4360	217	

Sample concentrations shown in red/bold exceed USEPA Ecotox Thresholds.

DATA QUALIFIERS

QUALIFIER	DEFINITION ORGANICS	DEFINITION INORGANICS
U	Compound was tested for but not detected. The sample quantitation limit must be corrected for dilution and for percent moisture. For soil samples subjected to GPC clean-up procedures, the CRQL is also multiplied by two, to account for the fact that only half of the extract is recovered.	Analyte was analyzed for but not detected.
J	Estimated value. Used when estimating a concentration for tentatively identified compounds (TICS) where a 1:1 response is assumed or when the mass spectral data indicate the presence of a compound that meets the identification criteria and the result is less than the sample quantitation limit but greater than zero. Used in data validation when the quality control data indicate that a value may not be accurate.	Estimated value. Used in data validation when the quality control data indicate that a value may not be accurate.
C	This flag applies to pesticide results where the identification is confirmed by GC/MS.	Method qualifier indicates analysis by the Manual Spectrophotometric method.
B	Analyte was found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	The reported value is less than the CRDL but greater than the instrument detection limit (IDL).
D	Identifies all compounds identified in an analysis at a secondary dilution factor. If a sample or extract is re-analyzed at a higher dilution factor as in the "E" flag, the "DL" suffix is appended to the sample number on the Form I for the diluted sample, and <u>all</u> concentration values are flagged with the "D" flag.	Not used.
E	Identifies compounds whose concentrations exceed the calibration range for that specific analysis. All extracts containing compounds exceeding the calibration range must be diluted and analyzed again. If the dilution of the extract causes any compounds identified in the first analysis to be below the calibration range in the second analysis, then the results of both analyses must be reported on separate Forms I. The Form I for the diluted sample must have the "DL" suffix appended to the sample number.	The reported value is estimated because of the presence of interference.
A	This flag indicates that a TIC is a suspected aldol concentration product formed by the reaction of the solvents used to process the sample in the laboratory.	Method qualifier indicates analysis by Flame Atomic Absorption (AA).
M	Not used.	Duplicate injection (a QC parameter not met).

N	Not used.	Spiked sample (a QC parameter not met).
S	Not used.	The reported value was determined by the Method of Standard Additions (MSA).
W	Not used.	Post digestion spike for Furnace AA analysis (a QC parameter) is out of control limits of 85% to 115% recovery, while sample absorbance is less than 50% of spike absorbance.
*	Not used.	Duplicate analysis (a QC parameter not within control limits).
+	Not used.	Correlation coefficient for MSA (a QC parameter) is less than 0.995.
P	Not used.	Method qualifier indicates analysis by ICP (Inductively Coupled Plasma) Spectroscopy.
CV	Not used.	Method qualifier indicates analysis by Cold Vapor AA.
AV	Not used.	Method qualifier indicates analysis by Automated Cold Vapor AA.
AS	Not used.	Method qualifier indicates analysis by Semi-Automated Cold Spectrophotometry.
T	Not used.	Method qualifier indicates Titrimetric analysis.
NR	The analyte was not required to be analyzed.	The analyte was not required to be analyzed.
R	Rejected data. The QC parameters indicate that the data is not usable for any purpose.	Rejected data. The QC parameters indicate that the data is not usable for any purpose.

3.7 COMPARISON OF CONCENTRATIONS TO STANDARDS/BENCHMARKS

3.7.1 Sediment Samples

The concentrations of contaminants found in the sediment samples were compared to USEPA Ecotox Thresholds. Ecotox Thresholds are ecological benchmarks that are media-specific contaminant concentrations above which there is sufficient concern regarding adverse ecological effects to warrant further site investigation. Ecotox Thresholds are to be used for screening purposes and are not regulatory criteria, site-specific cleanup standards, or remediation goals.

In sample X202 the concentration of Aroclor 1242, 57 ug/kg, exceeds the USEPA Sediment Ecotox Threshold of 23 ug/kg; the concentration of nickel, 45.8 mg/kg exceeds the threshold of 21 mg/kg; and the concentration of zinc, 729 mg/kg, exceeds the threshold of 150 mg/kg. In sample X203 the concentration of nickel, 24.5 mg/kg, exceeds USEPA 's Ecotox Threshold of 21 mg/kg. Threshold values for sediments do not exist for the other key sample analytes.

3.7.2 Groundwater Samples

Groundwater sample G103 contained cadmium, chromium, and zinc at concentrations significantly above the background sample (G101) concentration. These concentrations are well below their respective Maximum Contaminant Levels, which establish the maximum allowable concentration in public drinking water supplies. These analytes were also detected at elevated levels in landfill samples. It should be noted that due to the local geography and geology, along with other possible sources in the vicinity, it is not possible to attribute the groundwater contaminants in G103 exclusively to the landfill. Installation of monitoring wells would likely be required to more thoroughly determine what impact the landfill has on local groundwater.

4.0 SOURCE CHARACTERIZATION

4.1 LANDFILL

As mentioned previously, landfilling at the Banner Western Disposal site began in 1968 and continued until 1973. In 1976, after three years of inactivity, the IEPA inspected the site and found that the landfill was satisfactorily closed and covered. Because much of the life of the landfill occurred prior to the existence of strict regulation, the exact size of the filled area is not known. It is estimated from file information and aerial photographs that approximately 45 acres of the 64-acre parcel have been filled.

No type of liner is known to exist at the site. It does appear that perhaps leachate and/or runoff from the southwest corner of the site may have been directed toward the unnamed stream, as a metal pipe is reported to exist in this area, running from the landfill toward the stream. This pipe was not located during the STEP activities.

Little information is available discussing the wastes accepted at the landfill. According to Benjamin Bennett, the landfill, which was operated by Banner Disposal (and later Banner Western Disposal) accepted municipal waste from Joliet, and inspections conducted in the 1970s report that the landfill received demolition, putrescible, and combustible materials. Considering the years of operation, it is possible that wastes currently considered hazardous were deposited there.

During the 1989 CERCLA Screening Site Inspection, numerous volatile and semi-volatile organic compounds were detected in soil/sediment samples collected from the landfill. These

organic compounds were also detected in sediment samples collected from the unnamed stream, both near the north end of the site and the south end of the site. Refer to Appendix E for SSI sampling data. During the 1995 Focused Site Inspection Prioritization inspection, numerous organic compounds were detected again in soil/sediment samples collected at the landfill. Various inorganic analytes were also detected at concentrations significantly above the background concentrations: aluminum, arsenic, barium, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, silver, and sodium. Refer to Appendix F for FSIP sampling data.

Again in the 1996 CERCLA STEP, numerous semivolatiles and some pesticides were detected in onsite samples, though mostly at low concentrations. Those compounds found at levels significantly above background were xylene (total), fluoranthene, pyrene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, and indeno(1,2,3-cd)pyrene. Aroclor 1248 and 1260 were also detected above background concentrations. Inorganics significantly above background are arsenic, cadmium, calcium, chromium, copper lead, magnesium, mercury, nickel, thallium, and zinc. Appendix G contains laboratory data for the samples collected during the 1996 STEP investigation.

5.0 MIGRATION/EXPOSURE PATHWAYS

5.1 INTRODUCTION

The CERCLA Site Assessment Program identifies three migration pathways and one exposure pathway by which hazardous substances may pose a threat to human health and/or the environment. Consequently, sites are evaluated based on their known or potential impact on these four pathways. The pathways evaluated are groundwater migration, surface water migration, soil exposure, and air migration.

This section presents and discusses information collected during the CERCLA Site Team Evaluation Prioritization of the Banner Western Disposal site. This information, together with information documented in other sources, will be utilized in analyzing the site's impact on the four pathways and the various human and environmental targets with the established target distance limits.

Discussions of the pathways will include pathway descriptions; contaminant sources; and targets, such as human populations, fisheries, endangered species, wetlands and other sensitive environments.

5.2 GROUNDWATER

Information regarding the geology of the area indicate the presence of two primary aquifers of concern (AOC). The upper AOC consists of two hydraulically connected formations - the unconsolidated glacial drift and the underlying Silurian dolomite. The glacial drift consists of sand and gravel with small clay lenses. Estimates of the thickness of the drift range from 5

unconsolidated glacial drift and the underlying Silurian dolomite. The glacial drift consists of sand and gravel with small clay lenses. Estimates of the thickness of the drift range from 5 feet to 90 feet. The underlying Silurian dolomite is estimated to vary in thickness from 0 to 265 feet. Below the Silurian system is the Ordovician Maquoketa Shale Formation, a known aquitard, separating the Silurian system from the lower Cambrian-Ordivician aquifer system. The Cambrian-Ordivician system ranges in depth from 500 to 2000 feet below ground surface. According to the U.S. Geological Survey, the general flow of groundwater in the area appears to be to the south-southeast, toward the Des Plaines River.

Drinking water in the area is obtained from both public and private wells. Municipal water systems supply the cities of Rockdale and Joliet; the subdivisions Cresthill, Shorewood, and Clearview; and the Modern Mobile Home Park. The city of Joliet has one well located between 2 and 3 miles of the site, and two wells located between 3 and 4 miles of the site. These wells draw water from the Cambrian-Ordivician aquifer, and the water is blended to serve approximately 78,000 people. The city of Rockdale operates one well located 1.5 miles from the site. This well also draws water from the Cambrian-Ordivician aquifer, and serves approximately 1,709 people. Three of Cresthill's five wells are located between 3 and 4 miles of the site, two wells drawing from the Silurian aquifer, and one screened in the Cambrian-Ordivician aquifer. Shorewood operates a system of four wells, blending the water to serve approximately 1,600 people. Two of the four wells are located between 3 and 4 miles of the site, one drawing from the Silurian aquifer and one drawing from the Cambrian-Ordivician aquifer.

The Clearview subdivision operates two wells, serving approximately 315 people. The wells are

located between 3 and 4 miles of the site, and draw water from the Silurian aquifer. The Modern Mobile Home Park operates a system of 2 wells, both located between 2 and 3 miles of the site and serving approximately 50 residents. One of the wells draws water from the Silurian aquifer, while the other draws from the Cambrian-Ordivician aquifer. The water from these wells is blended.

Others residing within 4 miles of the site are assumed to obtain potable water from private wells. An estimated 4,989 residents obtain water from private systems. This estimate is based on a house count from a topographic map, utilizing a 2.98 person-per-household census value. A four-mile radius map can be found in Appendix A.

During the 1989 CERCLA SSI, groundwater samples were collected from four residential wells located to the east, west and southwest of the site. Analytical results of the well samples were compared to IEPA TACO Class I Groundwater remediation objectives. Three of these wells were found to contain concentrations exceeding the Class I objective for lead. However, lead was not attributable to the site.

During the STEP inspection, groundwater was collected from two private wells, one upgradient and one downgradient of the landfill. The upgradient sample location, G101, was collected approximately 350 feet north of the landfill. The downgradient sample was collected from a private well located approximately 0.75 mile south of the site, and south of the I&M Canal (no drinking water wells could be located between the site and the canal). According to the well owner, the well is 200 - 300 feet deep, and is used as a potable water supply although there are plans to connect to a public water supply in the spring of 1997. Four contaminants, cis-1,2-

dichloroethene, cadmium, chromium, and zinc, were detected at concentrations significantly higher than the background concentrations. Of these four contaminants, cadmium, chromium, and zinc were also detected in source samples. None of the four contaminants were present at concentrations exceeding MCLs (which establish the maximum allowable concentration in public drinking water supplies), nor did they exceed Class I groundwater remediation objectives.

5.3 SURFACE WATER

Runoff from the site enters the unnamed stream that is located along the western border of the site. The stream is formed from the confluence of two smaller streams, which originate north of Mound Road, one from the west, and one from the east. The eastern stream may be fed from dewatering of the sand/gravel pits located north of the site. After crossing under Mound Road the two streams meet, forming the perennial unnamed stream, which continues to flow south, passing under the Chicago, Rock Island and Pacific Railroad and continuing south approximately 750 feet through wetlands before entering the I&M Canal. The canal is considered to be intermittent at this point, thus ending the surface water route. Runoff from the site enters this stream and its tributaries, although few well-defined drainage paths were noted. A map showing the surface water route can be found in Appendix A.

South of the site (south of the railroad and north of the canal) a culvert of unknown origin can be found along the eastern edge of the unnamed stream. The culvert is directed toward the unnamed stream, coming within approximately 5 feet of the stream. This may have been installed to drain the area to the east.

No known drinking water intakes exist along the surface water pathway. According to the Illinois Department of Natural Resources, the unnamed stream is not considered to be a fishery, and no sensitive environments, other than wetlands, have been identified along the surface water path. Although there are various areas onsite where water collects and reeds grow, these areas

are not designated as wetlands on the National Wetland Inventory maps. Only one small area in the northeast corner of the site is designated as a palustrine unconsolidated bottom wetland in an excavated area. Additional designated wetlands (approximately 375 feet of wetland frontage) are located along a portion of the unnamed stream south of the site, between the railroad and the I & M Canal. The majority of this frontage area is designated as palustrine emergent wetlands.

Sample X201, which was collected from a designated wetland contained elevated concentrations of calcium and magnesium.

5.4 SOIL EXPOSURE

The Banner Western Disposal Landfill is considered to be covered. However, due to erosion and leachate seepage, a few areas of exposed soil and/or leachate are present. The presence of heavy vegetation during the summer and fall should limit the potential exposure. Although the landfill is inactive, workers from Joliet Sand & Gravel have limited contact with the site, since they haul sand and gravel to and from the stockpiles located along Mound Road. Access to the site is not restricted, and according to the 1995 FSIP report, the site has some recreational use, indicated by the presence of an onsite treehouse, and clay pigeons and shotgun shells on the ground. The site is located in an area of sparse residential population. Approximately 316 people reside within 1 mile of the site.

5.5 AIR PATHWAY

Three residences are located within 0.25 mile of the site, and an estimated 64,800 people reside within the 4-mile target distance limit. A map showing the 4-mile radius around the site can be found in Appendix A. Sensitive environments within 0.25 mile of the site are the Rockdale Railroad Prairie, a state natural area that is inhabited by the American Burnet, a state endangered plant species. Additional sensitive environments within 4 miles of the site include habitats for five state threatened or endangered species and six state natural areas. Approximately 1,056

acres of wetland areas are within the 4-mile target distance limit.

During the 1989 SSI, methane was detected near the ground surface in certain areas of the landfill. No samples have been collected from the sensitive environments. The one sample collected from a wetland (along the surface water route) indicated elevated concentrations of calcium and magnesium. The likelihood of particulate contaminants migrating through the air pathway is limited by the presence of thick vegetation covering the majority of the site.

APPENDIX A

Four-Mile Radius/Surface Water Route Map

SDMS US EPA Region V

Imagery Insert Form

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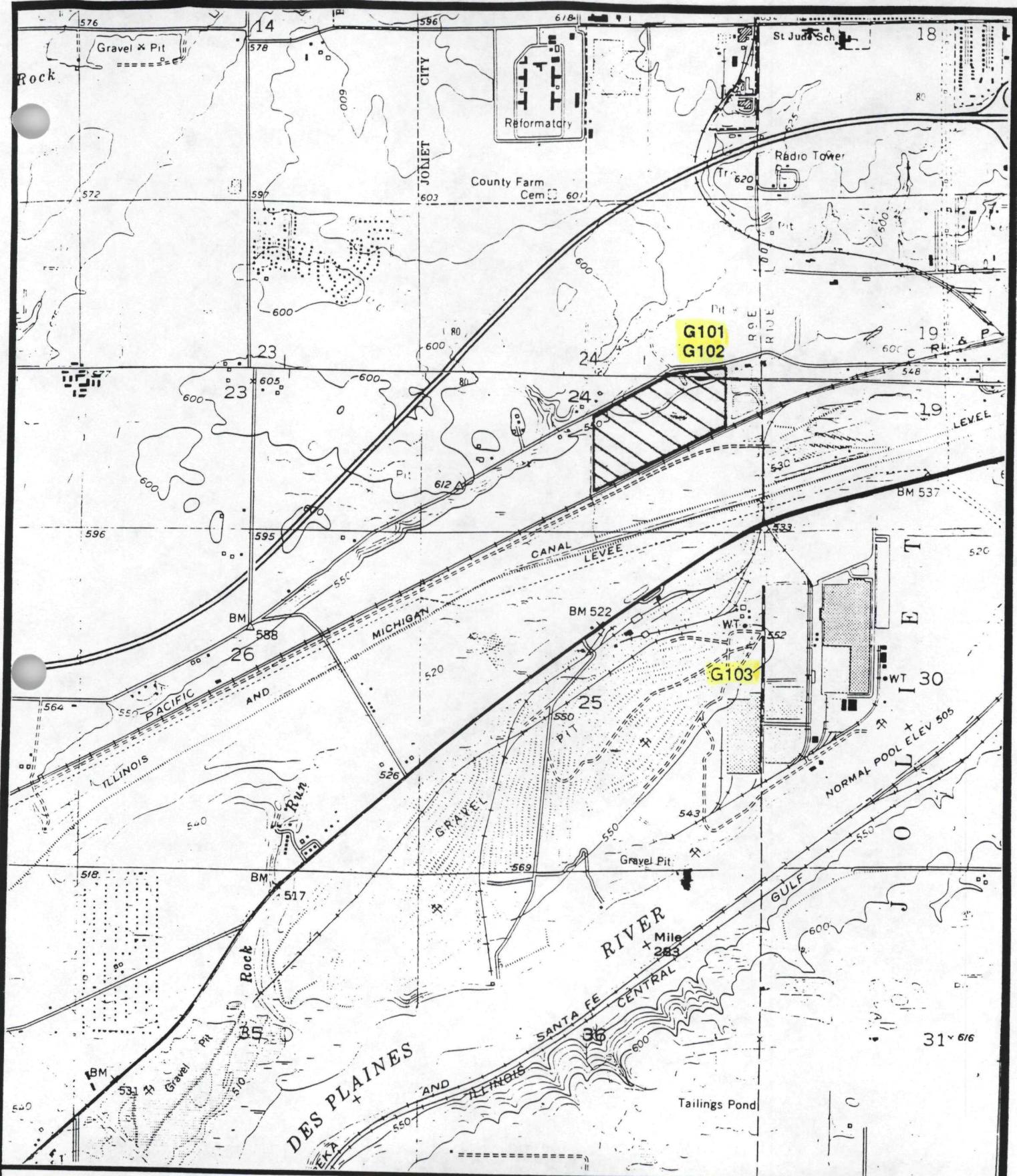
Appendix A – 4-mile radius map, surface water route map

Document is available at the EPA Region 5 Records Center.

Specify Type of Document(s) / Comments:

APPENDIX B

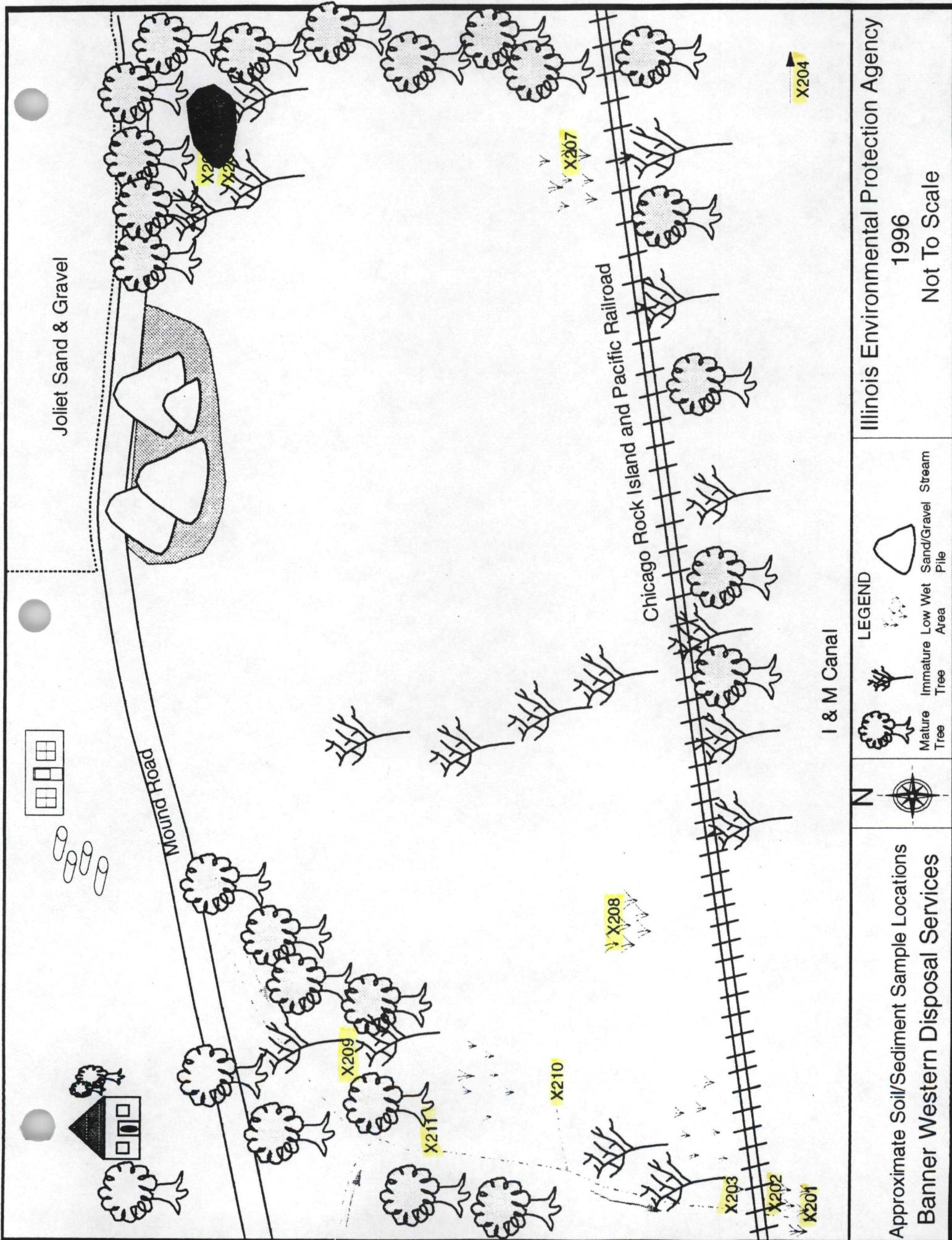
STEP Photographs



Groundwater Sample Locations
Banner Western Disposal Services



**Illinois Environmental
Protection Agency 1996**
Base Map: USGS Topographic Maps
Scale: 1" = 2000'



Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 12:05 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Photo taken at sample point X201, showing thick growth of cattails near I&M Canal	

DATE: 07-09-96
TIME: 12:05 pm
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: South-Southeast
Sample point X201, collected at the point where the unnamed stream enters I&M Canal.



Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 12:20 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Closeup photo of sample X202 collected on east edge of unnamed stream where culvert drains from the east (S of RR)	
DATE: 07-09-96	
TIME: 12:20 am	
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Sample point X202 collected from point where culvert drains from east	

Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 1:15 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Sample point X203	
collected at the point where south trib. from east enters unnamed stream (N of RR)	

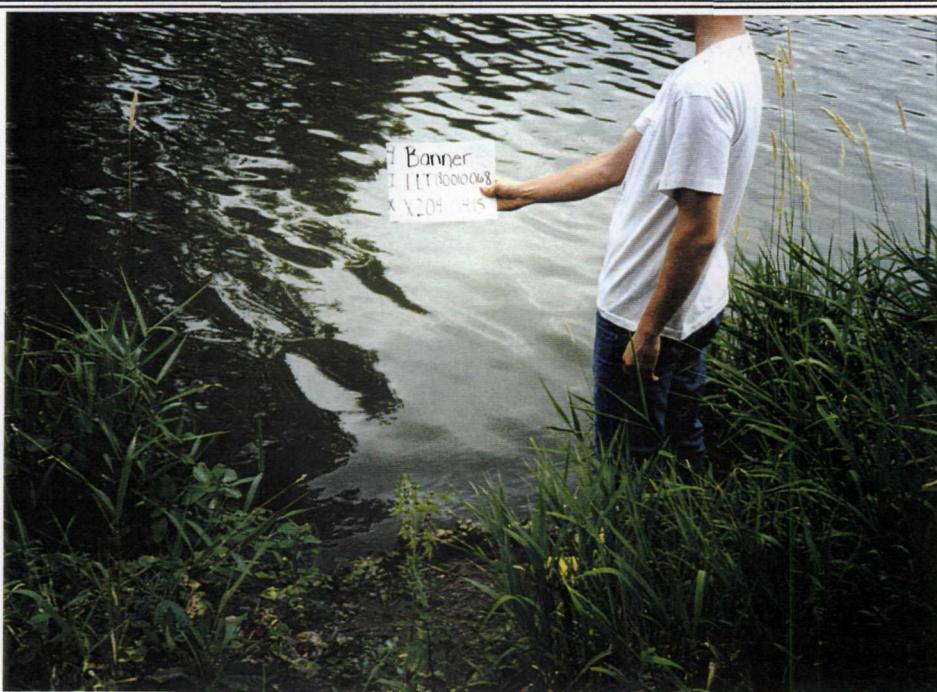
DATE: 07-09-96
TIME: 1:15 pm
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: Southeast
Sample point X203



Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 2:15 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: North	

Sample point X204 collected from the south bank of I&M Canal, upstream of site, at Schuller International



DATE: 07-09-96	
TIME: 2 15 pm	
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: West	
Sample point X204 showing bridge providing access to Schuller from Highway 6	

Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 4:20 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: East	



DATE: 07-09-96
TIME: 4:20 pm
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: Northeast
Closeup of sample points X205/X206 collected from pond area located near northeast corner of site



Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 4:20 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Sample points	
X205/X206	 <p>BANNER WESTERN DATE JULY 9 1996 TIME 4:20 PM SAMPLE 2006</p>



Site Team Evaluation Prioritization Photos

DATE: 07-09-96	ILT: 180010068 COUNTY: Will
TIME: 5:15 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: East	
Sample point X207 collected from low area in southeast corner of site at slope foot where leachate was noted	
DATE: 07-09-96	
TIME: 5:15 pm	
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Sample point X207 downslope from where leachate/ runoff noted during site recon aissance	

Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 9:30 am	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southwest	
Sample point X208 collected from small wetland area near southwest corner of site	

DATE:
TIME:
PHOTOGRAPH TAKEN BY:
COMMENTS: Picture taken toward:

Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 9:45 am	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: East	
Photo showing what may be the "tank" identified in the CERCLA FSIP report	

DATE: 07-10-96
TIME: 9:45 am
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: South
Sample point X209 collected approx.
20 feet down from "tank"



Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 10:45 am	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: North-Northwest	
Closeup of sample point X210 col- lected from upper part of "leachate stream" that ent- ers unnamed stream	

DATE: 07-10-96
TIME: 10:45 am
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: North-Northwest
Sample point X210



Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 11:00 am	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: South	
Sample point X211 collected from unnamed stream, upstream of confluence with stream from north & east	
DATE: 07-10-96	
TIME: 11:00 am	
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: South	
Sample point X211 collected from upper portion of unnamed stream	

Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 12:15 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: East	
Photo showing spigot on north side of Joliet Sand & Gravel office where G101/G102 were collected	
DATE: 07-10-96	
TIME: 12:15 pm	
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: Southeast	
Duplicate samples G101/G102 collected from Joliet Sand & Gravel well	

Site Team Evaluation Prioritization Photos

DATE: 07-10-96	ILT: 180010068 COUNTY: Will
TIME: 1:00 pm	SITE NAME: Banner Western Disposal Service
PHOTOGRAPH TAKEN BY: J. Triller	
COMMENTS: Picture taken toward: East	
Sample point G103	
collected from	
Crown Trygg Corp.	
bldg. located	
south of I&M Canal	
north of river	



DATE: 07-10-96
TIME: 1:00 pm
PHOTOGRAPH TAKEN BY: J. Triller
COMMENTS: Picture taken toward: Northeast
Sample point G103



APPENDIX C

Target Compound List



Target Compound List

Volatiles

Chloromethane	1,2-Dichloropropane
Bromomethane	Cis-1,3-Dichloropropene
Vinyl Chloride	Trichloroethene
Chloroethane	Dibromochloromethane
Methylene Chloride	1,1,2-Trichloroethane
Acetone	Benzene
Carbon Disulfide	trans-1,3-Dichloropropane
1,1-Dichloroethene	Bromoform
1,1-Dichloroethane	4-Methyl-2-pentanone
1,2-Dichloroethene (total)	2-Hexanone
Chloroform	Tetrachloroethene
1,2-Dichloroethane	Toluene
2-Butanone	1,1,2,2-Tetrachloroethane
1,1,1-Trichloroethane	Chlorobenzene
Carbon Tetrachloride	Ethyl benzene
Bromodichloromethane	Styrene
	Xylenes (total)

Source: Target Compound List for water and soil with low or medium levels of volatile and semivolatile organic contaminants, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

Target Compound List (Continued)

Semivolatiles

Phenol	Acenaphthene
bis(2-Chloroethyl) ether	2,4-Dinitrophenol
2-Chlorophenol	4-Nitrophenol
1,3-Dichlorobenzene	Dibenzofuran
1,4-Dichlorobenzene	2,4-Dinitrotoluene
1,2-Dichlorobenzene	Diethylphthalate
2-Methylphenol	4-Chlorophenyl-phenyl ether
2,2-oxybis-(1-Chloropropane)*	Fluorene
4-Methylphenol	4-Nitroaniline
N-Nitroso-di-n-dipropylamine	4,6-Dinitro-2-methylphenol
Hexachloroethane	N-Nitrosodiphenylamine
Nitrobenzene	4-Bromophenyl-phenyl ether
Isophorone	Hexachlorobenzene
2-Nitrophenol	Pentachlorophenol
2,4-Dimethylphenol	Phenanthrene
bis(2-Chloroethoxy) methane	Anthracene
2,4-Dichlorophenol	Carbazole
1,2,4-Trichlorobenzene	Di-n-butylphthalate
Naphthalene	Fluoranthene
4-Chloroaniline	Pyrene
Hexachlorobutadiene	Butyl benzyl phthalate
4-Chloro-3-methylphenol	3,3-Dichlorobenzidine
2-Methylnaphthalene	Benzo(a)anthracene
Hexachlorocyclopentadiene	Chrysene
2,4,6-Trichlorophenol	bis(2-Ethylhexyl)phthalate
2,4,5-Trichlorophenol	Di-n-Octyphthalate
2-Chloronephthalene	Benzo(b)fluoranthene
2-Nitroaniline	Benzo(k)fluoranthene
Dimethylphthalate	Benzo(a)pyrene
Acenaphthylene	Indeno(1,2,3-cd)pyrene
2,6-Dinitrotoluene	Dibenzo(a,h)anthracene
3-Nitroaniline	Benzo(g,h,i)perylene

*Previously known by the name of bis(2-chloroisopropyl) ether.

Source: Target Compound List for water and soil with low or medium levels of volatile and semivolatile organic contaminants, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

Target Compound List (Continued)

Pesticide/PCB

alpha-BHC	4,4-DDT
beta-BHC	Methoxychlor
delta-BHC	Endrin ketone
gamma-BHC (Lindane)	Endrin aldehyde
Heptachlor	alpha-chlordane
Aldrin	gamma-chlordane
Heptachlor epoxide	Toxaphene
Endosulfan I	Aroclor-1016
Dieldrin	Aroclor-1221
4,4-DDE	Aroclor-1232
Endrin	Aroclor-1242
Endosulfan II	Aroclor-1248
4,4-DDD	Aroclor-1254
Endosulfan sulfate	Aroclor-1260

Source: Target Compound List for water and soil containing less than high concentrations of pesticides/aroclors, as shown in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

Target Analyte List

Aluminum	Magnesium
Antimony	Manganese
Arsenic	Mercury
Barium	Nickel
Beryllium	Potassium
Cadmium	Selenium
Calcium	Silver
Chromium	Sodium
Cobalt	Thallium
Copper	Vanadium
Iron	Zinc
Lead	Cyanide

Source: Target Analyte List in the Quality Assurance Project Plan for Region V Superfund Site Assessment Program, September 27, 1991.

APPENDIX D

CERCLA Screening Site Inspection Data

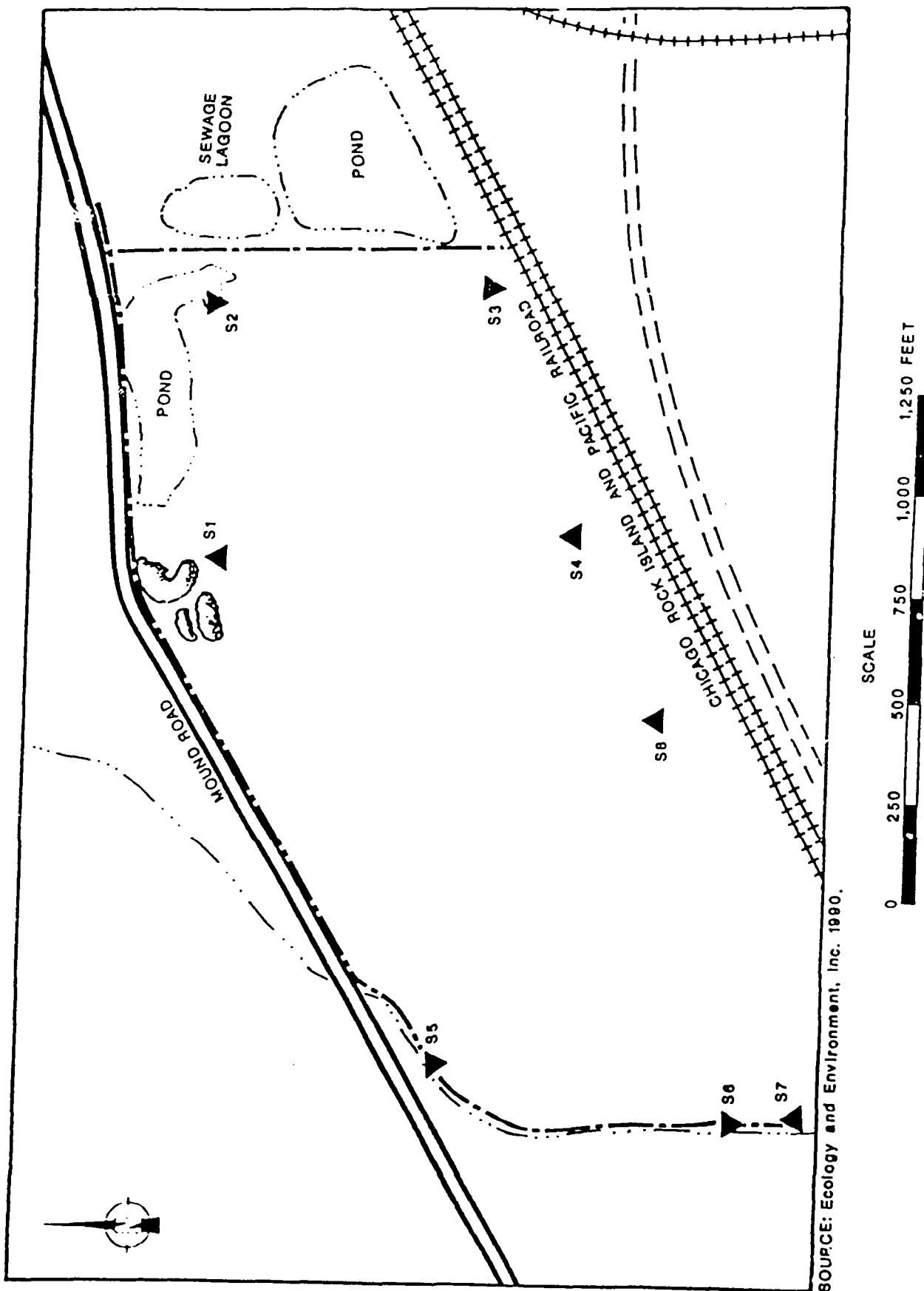
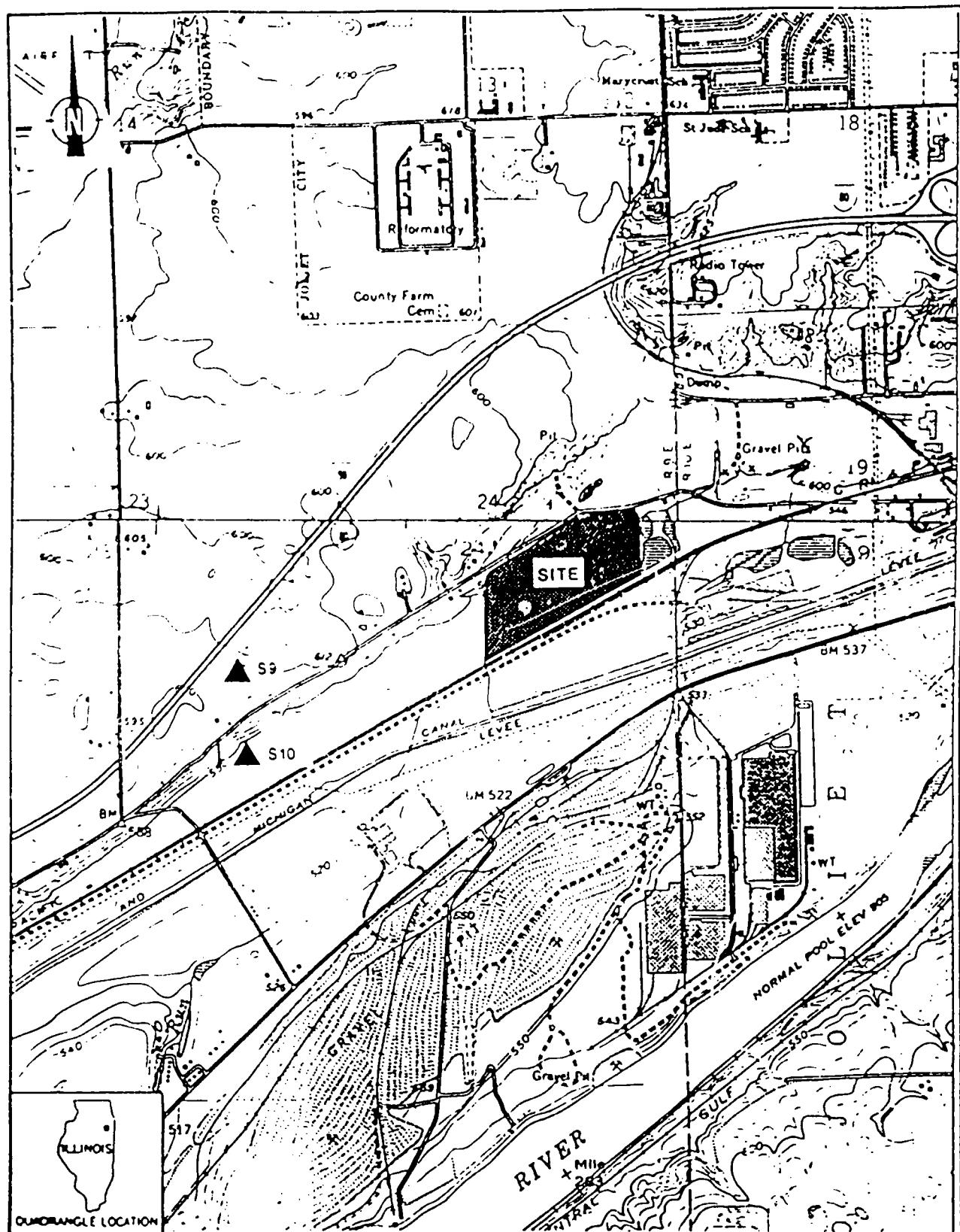


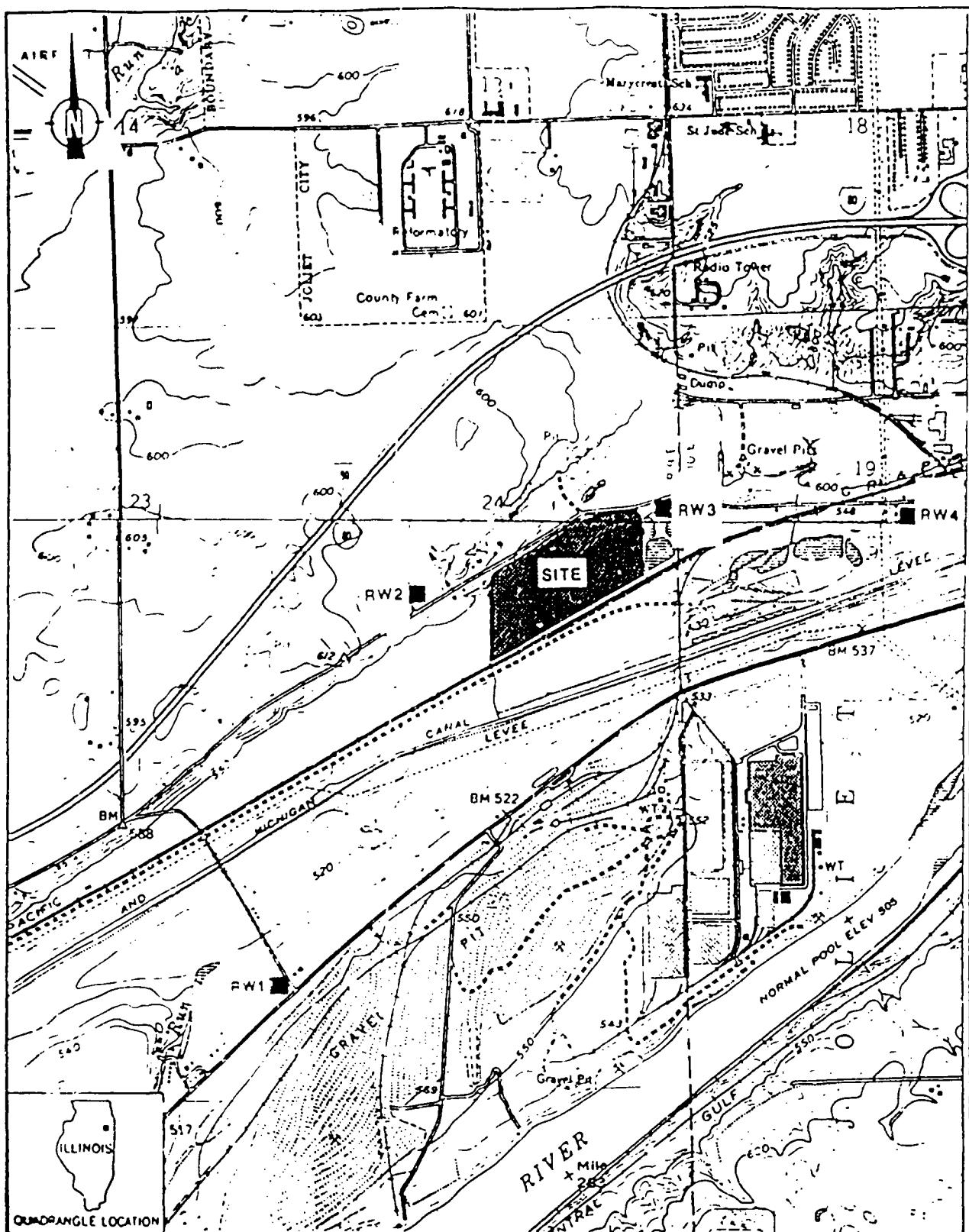
FIGURE 3-2 ON-SITE SOIL/SEDIMENT SAMPLING LOCATIONS



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Channahon, IL Quadrangle, 7.5 Minute Series, 1954, Photorevised 1973; Plainfield, IL Quadrangle, 7.5 Minute Series, 1962, Photorevised 1973.

SCALE
0 $\frac{1}{2}$ 1 MILE

FIGURE 3-3 CFF-SITE SOIL SAMPLING LOCATIONS



SOURCE: Ecology and Environment, Inc. 1990; BASE MAPS: USGS, Channahon, IL Quadrangle, 7.5 Minute Series, 1954, Photorevised 1973; Plainfield, IL Quadrangle, 7.5 Minute Series, 1962, Photorevised 1973.

SCALE
0 $\frac{1}{2}$ 1 MILE

FIGURE 3-4 RESIDENTIAL WELL SAMPLING LOCATIONS

Table I
RESULTS OF CHEMICAL ANALYSIS OF
FRT-COLLECTED SOIL/SEDIMENT SAMPLES

Sample Collection Information and Parameters		S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Date	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	4/18/89	
FRT	EDK20 MEC268	EDK21 MEC269	EDK22 MEC270	EDK23 MEC271	EDK24 MEC272	EDK25 MEC273	EDK26 MEC274	EDK27 MEC275	EDK28 MEC276	EDK29 MEC277	
Compound Detected (values in µg/g)											
Volatile Organics											
chloroethane	-	-	-	-	-	-	-	-	-	-	
1,1-dichloroethane	-	-	-	-	-	-	-	-	-	-	
1,2-dichloroethene (total)	-	-	-	-	-	-	-	-	-	-	
trichloroethene	-	-	-	-	-	-	-	-	-	-	
benzene	-	-	-	-	-	-	-	-	-	-	
4-methyl-2-pentanone	-	-	-	-	-	-	-	-	-	-	
tetrachloroethene	-	-	-	-	-	-	-	-	-	-	
toluene	-	-	-	-	-	-	-	-	-	-	
ethylbenzene	-	-	-	-	-	-	-	-	-	-	
xylenes (total)	-	-	-	-	-	-	-	-	-	-	
Semivolatile Organics											
4-ethylphenol	-	-	-	-	-	-	-	-	-	-	
benzoic acid	-	-	-	-	-	-	-	-	-	-	
naphthalene	-	-	-	-	-	-	-	-	-	-	
2-bethylnaphthalene	4,000	2,800	890	-	-	-	-	-	-	-	
acenaphthylene	2,100	890	2,200	-	-	-	-	-	-	-	
acenaphthene	2,600	2,200	2,900	-	-	-	-	-	-	-	
dibenzofuran	300	290	290	-	-	-	-	-	-	-	
fluorene	860	590	590	-	-	-	-	-	-	-	
pentachlorophenol	630	460	460	-	-	-	-	-	-	-	
phenanthrene	72	7,300	5,000	-	-	-	-	-	-	-	
anthracene	-	3,400	2,900	-	-	-	-	-	-	-	
di-n-butylphthalate	-	-	190	-	-	-	-	-	-	-	
fluoranthene	120	8,900	15,000	-	-	-	-	-	-	-	
pyrene	110	6,700	12,000	110	660	630	850	-	-	-	
benzofluoranthene	57	6,400	15,000	990	990	990	490	-	-	-	
chrysene	83	7,600	14,000	110	110	110	730	-	-	-	
benzofluoranthene	67	10,000	17,000	110	600	600	980	-	-	-	
benzofluoranthene	71	8,000	11,000	860	860	110	110	-	-	-	
benzalpyrene	57	9,000	10,000	67	420	420	640	-	-	-	
indeno[1,2,3-cd]pyrene	-	5,900	10,000	400	400	70	70	-	-	-	
dibenzofluoranthene	-	1,600	3,700	-	-	-	-	-	-	-	
benzofluoranthene	-	6,700	9,400	-	-	-	-	-	-	-	

Table 4-1 (Cont.)

**Sample Collection Information
and Parameters**

Pesticides/PCBs	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10
Hepatobile	--	--	--	21	--	--	--	--	--	--
gamma-Dihydro	--	--	--	73	64	--	--	--	--	--
Analyte Detected (values in ppM/g)										
aluminum	6,420	14,100	9,170	8,710	10,800	12,400	4,460	7,650	8,336	8,850
arsenic	6.8	27.3	23.8	13.4	10.5	12.9	7.9	11.4	7.7	9
barium	33.9	544	197	55.9	65.4E	121	59.7E	75.7	116	114
beryllium	0.498	3.4	1.18	1.4	1.7	1.8	--	--	--	--
cadmium	--	63.5	55.7	--	--	9.9	2.6	0.788	--	--
calcium	72,590	43,300	49,100	61,100	49,200	25,000	165,000	74,900	5,110	8,300
chromium	11.5	850	79.5	15.2	23.8	134	28.1	16.3	5.1	12.1
cobalt	5.98	13.38	63.1	101	6.88	7.49	3.58	4.28	9.18	8.5
copper	22.5	627	326	30.1	27.3	93.1	47.8	16.2	15.5	19.5
iron	16,300	27,800	28,300	27,700	20,800	27,500	22,300	20,100	16,200	17,700
lead	15.8	821	142	24.9	20.1	94.5	76.6	13.8	25.8	37.3
mercury	42,500	22,000	29,600	33,700	25,200	15,500	19,500	38,100	3,420	5,000
manganese	392	420	2,720	438	430	256	323	395	1,010	733
nickel	--	7.63E	0.753E	--	--	0.863E	--	--	--	--
potassium	15.5	145	168	26.6	24.7	35.2	11.38	13	15	14.6
rubidium	1,480	2,510	2,210	2,440	2,270	2,550	1,190E	2,480	1,370	1,980
seleium	--	1.93BMW	--	--	--	0.543BMW	--	--	--	0.633BMW
silver	--	18.3	3.9	--	--	--	--	--	--	--
sodium	1453	5593	7230	3528	2730	1,180E	945E	627E	50.30E	50.50
thallium	--	1.11BMW	0.653BMW	--	--	--	--	--	--	--
vanadium	16.2	33.6	29.7	24.2	26.6	32.1	14.2	22.2	24.8	24.4
zinc	65.93E	2,850JE	1,680JE	69.4JE	78.8JE	430JE	1,120JE	57JE	68.1JE	93.7JE
cyanide	--	--	2.33N	--	--	5.63N	--	--	--	--

-- Not detected.

Table 4-1 (Cont.)

COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative. Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative. Value may be quantitative or semi-quantitative.
N	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
B	Value is above CRDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.
J	Post-digestion spike for furnace AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semiquantitative.
V		

Source: Ecology and Environment, Inc. 1990.

Table 4-2
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED RESIDENTIAL WELL SAMPLES

Sample Collection Information and Parameters	RW1	Duplicate	Sample Number			Blank
			RW2	RW3	RW4	
Date	4/19/89	4/19/89	4/19/89	4/19/89	4/19/89	4/19/89
Time	10:30	10:30	11:05	11:30	12:00	10:30
CRL Log Number	89PM15513	89PM15513	89PM15514	89PM15515	89PM15516	89PM10R46
CRL Organic Traffic Report Number	EDK10	EDK11	EDK12	EDK13	EDK14	EDK15
CRL Inorganic Traffic Report Number	MEC276	MEC279	MEC280	MEC281	MEC282	MEC283
Temperature (°C)	4	4	3	2	3	6
Specific Conductivity (μmhos/cm)	967	967	1026	1932	1726	13.4
pH	6.18	6.38	6.91	6.60	7.04	4.84
<u>Compound Detected</u> (values in μg/L)						
<u>Volatile Organics</u>						
vinyl chloride	—	—	—	—	0.43	—
chloroethane	—	—	—	30	—	—
acetone	—	—	—	—	—	7.3
1,1-dichloroethane	—	—	—	0.43	—	—
benzene	—	—	—	—	1	—
chlorobenzene	—	—	—	—	2	—
<u>Semivolatile Organics</u>						
bis(2-ethylhexyl)phthalate	—	—	—	—	2	—
<u>Analyte Detected</u> (values in μg/L)						
aluminum	110JB	—	—	92JB	86JB	—
antimony	—	—	—	—	—	2.5B
arsenic	1.2JB	0.9JB	—	5.5J	2.3JB	—
barium	54B	55B	33B	125B	94B	—
calcium	62,900JB	66,600JB	77,200JB	114,000JB	114,000JB	770JB
copper	—	—	37	—	45	—
iron	632J	656J	52JB	1,490J	925	927

Table 4-2 (Cont.)

Sample Collection Information and Parameters	RW1	Duplicate	Sample Number			
			RW2	RW3	RW4	Blank
lead	14.5J+	—	10.5J+	—	200J+	—
magnesium	37,300JZ	37,200JZ	39,600JZ	64,300JZ	58,800JZ	307JZ
manganese	98	98	—	—	64	—
potassium	3,430JBN	3,640JBN	1,630JBN	6,440JN	7,350JN	—
selenium	1.2B	1.3	—	—	—	—
silver	—	—	9B	—	—	—
sodium	15,100	16,200	15,600	66,600	45,800	—
thallium	0.5JB	0.9JB	—	—	—	—
tin	98J	129J	107J	122J	176J	26J

— Not detected.

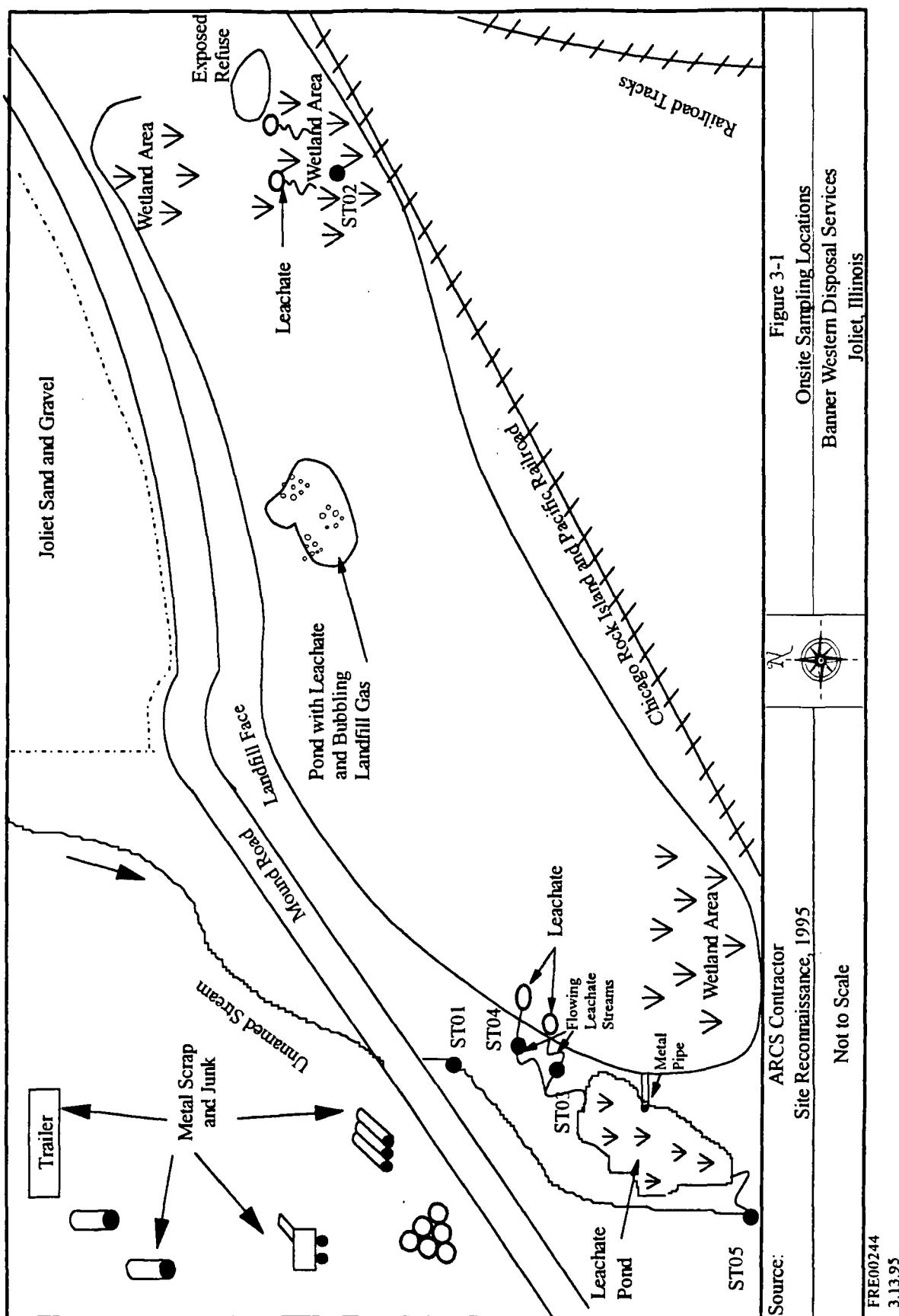
Table 4-2 (Cont.)

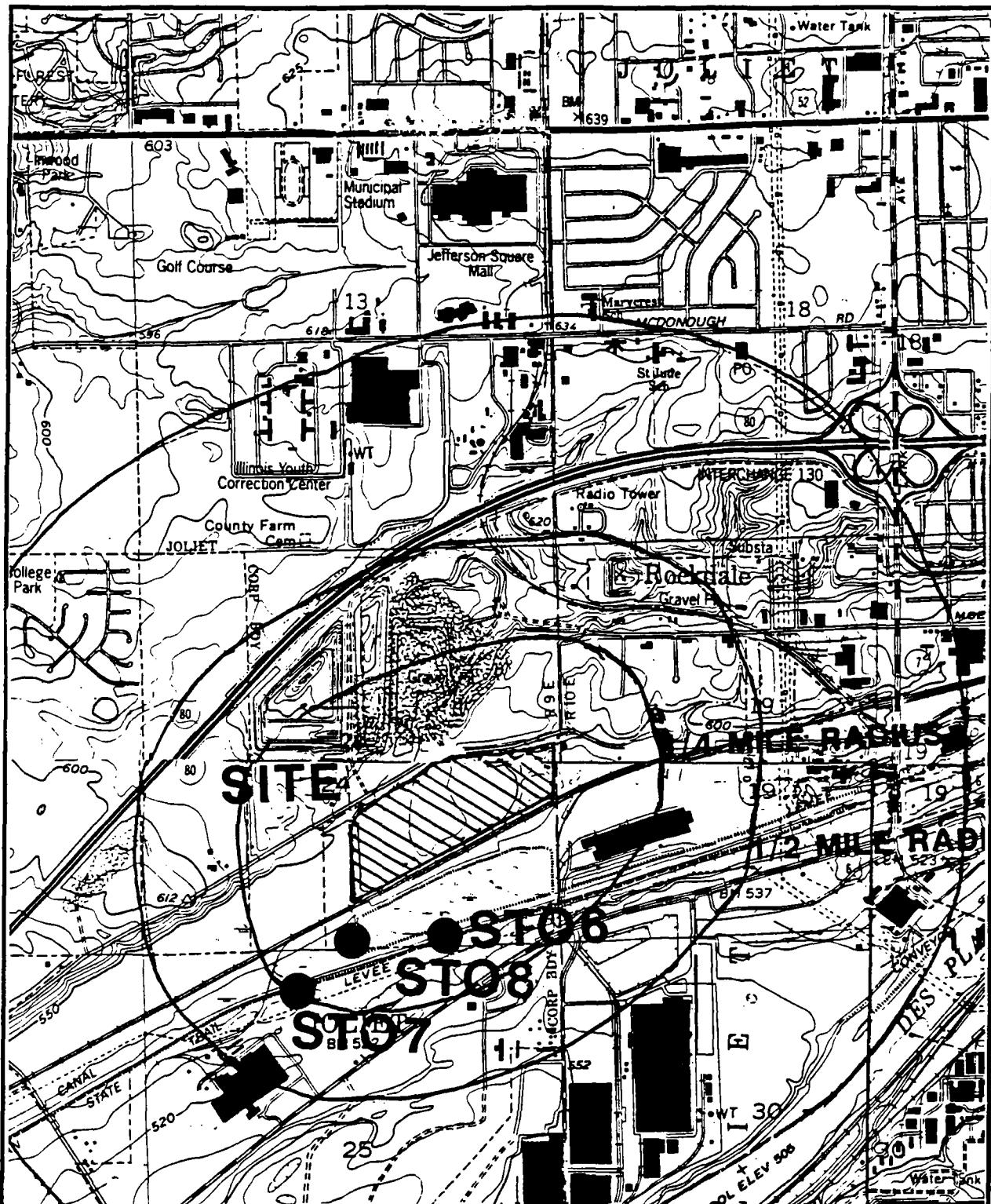
COMPOUND QUALIFIER	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semiquantitative.
ANALYTE QUALIFIERS	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Analyte or element was not detected, or value may be semiquantitative.
W	Spike recoveries outside QC protocols, which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be quantitative or semi-quantitative.
+	Correlation coefficient for standard addition is less than 0.995. See review and laboratory narrative.	Data value may be biased.
B	Value is real, but is above instrument DL and below CIDL.	Value may be quantitative or semi-quantitative.
J	Value is above CIDL and is an estimated value because of a QC protocol.	Value may be semiquantitative.

Source: Ecology and Environment, Inc. 1990.

APPENDIX E

CERCLA Focused Site Inspection Prioritization Data





Source: USGS Plainfield 1954,
Channahon 1962

Scale:

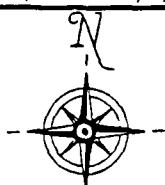


Figure 3-2
Offsite Sample Location Map

**Banner Western Disposal Service
Joliet, Illinois**

Table 3-1
Sample Descriptions
Banner Western Disposal Service

Sample	Depth (in inches)	Appearance	Location
ST01	0 - 6	Sand and gravel with some silt	The unnamed stream 10 feet south of Mound Road to establish background concentrations.
ST02	0 - 6	Brown silt with sand and gravel	The wetland area near the southeastern site corner.
ST03	0 - 6	Black silt with gravel	Leachate stream flowing into the leachate pond in the southwestern site corner.
ST04	0 - 6	Black silt with gravel	The second leachate stream flowing along the western side of the site.
ST05	0 - 6	Gray to brown silt with sand and gravel	The unnamed stream where the leachate pond enters the unnamed stream.
ST06	0 - 6	Black silt	The I&M Canal approximately 600 feet upstream of the confluence of the I&M Canal and the unnamed stream.
ST07	0 - 6	Silt	The I&M Canal approximately 50 feet downstream of the confluence of the I&M Canal and the unnamed stream.
ST08	0 - 6	Black/brown silt with some sand and gravel	The unnamed stream approximately 600 feet downstream of ST05.

Table C-1
Volatile Organic Analysis for Sediment Samples
Banner Western Disposal Service

Volatile Compound	Sample Numbers / Concentrations in ug/kg							
	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Chloromethane	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
Bromomethane	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
Vinyl Chloride	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
Chloroethane	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
Methylene Chloride	26 UB	2 J	15 J	19 UJB	14 UJ	17 UJB	17 U	18 UJB
Acetone	13 UJB	97 B	16 UB	30 UJB	14 UJB	17 UJB	17 UJB	30 UJB
Carbon Disulfide	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
1,1-Dichloroethene	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
1,1-Dichloroethane	13 U	23	12 U	19 UJ	14 U	17 U	17 U	18 U
1,2-Dichloroethene (total)	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
Chloroform	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
1,2-Dichloroethane	13 U	15 U	12 U	19 UJ	14 U	17 U	17 U	18 U
2-Butanone	13 U	15 UJB	12 UJB	7 J	14 U	4 J	17 UJB	7 J
1,1,1-Trichloroethane	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Carbon Tetrachloride	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Bromodichloromethane	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
1,2-Dichloropropane	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
cis-1,3-Dichloropropene	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Trichloroethene	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Dibromochloromethane	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
1,1,2-Trichloroethane	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Benzene	13 U	2 J	1 J	19 UJ	14 U	17 U	17 U	18 U
trans-1,3-Dichloropropene	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
Bromoform	13 U	15 U	12 UJ	19 UJ	14 U	17 U	17 U	18 U
4-Methyl-2-Pentanone	13 UJ	15 U	12 UJ	19 UJ	14 U	17 UJ	17 UJ	18 UJ
2-Hexanone	13 UJ	15 UJ	12 UJ	19 UJ	14 UJ	17 UJ	17 UJ	18 UJ
Tetrachloroethene	13 U	15 U	12 UJ	19 UJ	14 U	17 UJ	17 UJ	18 U
1,1,2,2-Tetrachloroethane	13 UJ	15 U	12 UJ	19 UJ	14 U	17 UJ	17 UJ	18 UJ
Toluene	13 U	35	23 J	19 UJ	14 U	17 UJ	17 UJ	18 U
Chlorobenzene	13 U	15 U	1 J	19 UJ	14 U	17 UJ	17 UJ	18 U
Ethylbenzene	13 U	45	74 J	4 J	14 U	17 UJ	17 UJ	18 U
Styrene	13 U	15 U	12 UJ	19 UJ	14 U	17 UJ	17 UJ	18 U
Xylene (total)	13 U	83	260 J	97 J	2 J	17 UJ	17 UJ	18 U
Total Number of TICS *	1	2	28	21	4	2	1	0

* Number, not concentrations, of tentatively identified compounds (TICs).

BANNER\TABLE C-IV\DATASED-VOL.WK4

Table C-2
Semivolatile Organic Analysis for Sediment Samples
Banner Western Disposal Service

Compound	Sample Location Concentrations in ug/kg							
	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Phenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
bis(2-Chloroethyl)Ether	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2-Chlorophenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
1,3-Dichlorobenzene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
1,4-Dichlorobenzene	430 U	500 U	390 U	250 J	470 U	550 U	550 U	590 U
1,2-Dichlorobenzene	430 U	500 U	390 U	99 J	470 U	550 U	550 U	590 U
2-Methylphenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2-2'-oxybis(1-Chloropropane)	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
4-Methylphenol	430 U	500 U	390 U	250 J	470 U	28 J	550 U	20 J
N-Nitroso-di-n-propylamine	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Hexachloroethane	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Nitrobenzene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Isophorone	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2-Nitrophenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2,4-Dimethylphenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
bis(2-chloroethoxy)methane	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2,4-Dichlorophenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
1,2,4-Trichlorobenzene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Naphthalene	430 U	40 J	36 J	1600	25 J	230 J	75 J	68 J
4-Chloroaniline	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Hexachlorobutadiene	430 UJ	500 UJ	390 UJ	630 UJ	470 UJ	550 UJ	550 UJ	590 UJ
4-Chloro-3-methylphenol	430 U	26 J	390 U	630 U	470 U	550 U	550 U	590 U
2-Methylnaphthalene	430 U	500 U	25 J	840	470 U	240 J	62 J	53 J
Hexachlorocyclopentadiene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2,4,6-Trichlorophenol	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2,4,5-Trichlorophenol	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
2-Chloronaphthalene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
2-Nitroaniline	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
Dimethylphthalate	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Acenaphthylene	430 U	500 U	390 U	650	470 U	820	120 J	54 J
2,6-Dinitrotoluene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
3-Nitroaniline	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
Acenaphthene	430 U	500 U	20 J	370 J	470 U	45 J	550 U	38 J

Table C-2 (Continued)
Semivolatile Organic Analysis for Sediment Samples
Banner Western Disposal Service

Compound	Sample Location Concentrations in ug/kg							
	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
2,4-Dinitrophenol	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
4-Nitrophenol	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
Dibenzofuran	430 U	500 U	31 J	450 J	470 U	84 J	30 J	50 J
2,4-Dinitrotoluene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Diethylphthalate	430 U	500 U	390 U	630 U	470 U	140 J	550 U	590 U
4-Chlorophenyl-phenylether	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Fluorene	430 U	500 U	37 J	540 J	36 J	550 U	41 J	65 J
4-Nitroaniline	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
4,6-Dinitro-2-methylphenol	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
n-Nitrosodiphenylamine	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
4-Bromophenyl-phenylether	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Hexachlorobenzene	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Pentachlorophenol	1100 U	1200 U	980 U	1600 U	1200 U	1400 U	1400 U	1500 U
Phenanthrene	58 J	500 U	110 J	4900	90 J	1200	300 J	400 J
Anthracene	430 U	500 U	32 J	2100	44 J	670	180 J	160 J
Carbazole	430 U	500 U	35 J	630 U	35 J	73 J	20 J	39 J
di-n-butylphthalate	430 U	500 J	390 U	89 J	470 U	70 J	24 J	590 U
Fluoranthene	95 J	35 J	120 J	10000 D	180 J	2400	820	880
Pyrene	110 J	35 J	120 J	15000 D	240 J	4100 D	1000	980
Butylbenzylphthalate	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
3,3'-Dichlorobenzidine	430 U	500 U	390 U	630 U	470 U	550 U	550 U	590 U
Benzo(a)anthracene	52 J	500 U	60 J	4700	150 J	3500	800	540 J
Chrysene	73 J	42 J	78 J	9100 D	190 J	4400	1000	750
bis(2-Ethylhexyl)phthalate	430 U	500 UJB	390 UJB	9400 JBD	470 UJB	550 UJB	550 UJB	590 UJB
di-n-octylphthalate	430 U	500 U	390 U	100 J	10 J	550 U	18 J	590 U
Benzo(b)fluoranthene	49 J	27 J	61 J	14000	250 J	4200 D	1400	970
Benzo(k)fluoranthene	36 J	500 U	50 J	630 U	470 U	550 U	550 U	590 U
Benzo(a)pyrene	54 J	500 U	64 J	8000 D	160 J	4500 D	990	570 J
Indeno(1,2,3-cd)pyrene	34 J	500 U	48 J	7700 D	140 J	3200	760	360 J
Dibenz(a,h)anthracene	430 U	500 U	390 U	850	470 U	1400	280 J	71 J
Benzo(g,h,i)perylene	34 J	500 U	55 J	7600 D	110 J	2800	600	280 J
Total Number of TICs *	12	14	21	35	35	35	35	35

* Number, not concentration, of tentatively identified compounds (TICs).

BANNER TABLE C-2 DATA LIST - SEMIV WK4

Table C-3
Pesticide/PCB Analysis for Sediment Samples
Banner Western Disposal Service

Pesticide/ PCB	Sample Numbers / Concentrations in ug/kg							
	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Alpha-BHC	2.2 U	2.6 U	2.0 U	3.3 U	2.4 U	2.8 U	2.8 U	3.0 U
Beta-BHC	2.2 U	2.6 U	2.0 U	3.3 U	2.4 U	2.8 U	2.8 U	3.0 U
Delta-BHC	2.2 U	2.6 U	2.0 U	6.3 JP	2.4 U	2.8 U	2.8 U	3.0 U
Gamma-BHC (Lindane)	2.2 U	2.6 U	2.0 U	27 JP	2.4 U	2.8 U	2.8 U	3.0 U
Heptachlor	2.2 U	2.6 U	2.0 U	23 JP	2.4 U	2.8 U	2.8 U	3.0 U
Aldrin	2.2 U	4.8 P	2.0 U	22 JP	2.4 U	2.8 U	2.8 U	3.0 U
Heptachlor epoxide	2.2 U	2.6 U	2.0 U	3.3 U	2.4 U	2.8 U	2.8 U	3.0 U
Endosulfan I	2.2 U	2.6 U	2.0 U	3.3 U	2.4 U	2.8 U	2.8 U	3.0 U
Dieldrin	4.3 U	5.0 U	3.9 U	57 JP	4.7 U	39 JP	5.5 U	5.9 U
4,4'-DDE	4.3 U	5.0 U	3.9 U	82 JP	4.7 U	5.5 U	5.5 U	5.9 U
Endrin	4.3 U	5.0 U	3.9 U	56 JDP	4.7 U	53 J	7.9 P	6.9 JP
Endosulfan II	4.3 U	5.0 U	3.9 U	44 JP	4.7 U	5.5 U	5.5 U	5.9 U
4,4'-DDD	4.3 U	5.0 U	3.9 U	100 JP	4.7 U	5.5 U	5.6 P	5.9 U
Endosulfan sulfate	4.3 U	5.0 U	3.9 U	27 JP	4.7 U	5.5 U	5.5 U	5.9 U
4,4'-DDT	4.3 U	5.0 U	3.9 U	61 JP	4.7 U	22 J	8.6 P	5.9 U
Methoxychlor	22 U	26 U	20 U	150 J	24 U	28 U	28 U	30 U
1-n ketone	4.3 U	5.0 U	3.9 U	96 J	4.7 U	13 JP	9.0	5.9 U
1-n aldehyde	4.3 U	7.5	4.4 P	97 JP	4.7 U	5.5 U	23 P	5.9 U
Alpha-chlordane	2.2 U	3.0	2.0 U	39 JP	2.4 U	2.8 U	2.8 U	3.0 U
Gamma-chlordane	2.2 U	2.6 U	2.0 U	37 JP	2.4 U	2.8 U	2.8 U	3.0 U
Toxaphene	220 U	260 U	200 U	330 U	240 U	280 U	280 U	300 U
Aroclor-1016	43 U	50 U	39 U	63 U	47 U	55 U	55 U	59 U
Aroclor-1221	87 U	100 U	79 U	130 U	96 U	110 U	110 U	120 U
Aroclor-1232	43 U	50 U	39 U	63 U	47 U	55 U	55 U	59 U
Aroclor-1242	43 U	50 U	39 U	63 U	47 U	55 U	55 U	59 U
Aroclor-1248	43 U	50 U	39 U	63 U	47 U	55 U	55 U	59 U
Aroclor-1254	43 U	210 C	39 U	9900 UX	47 U	55 U	55 U	59 U
Aroclor-1260	43 U	50 U	39 U	63 U	47 U	55 U	55 U	59 U

BANNERITABLE C-3\DATA\PESTS\SED WK4

Table C-4
Inorganic Analysis for Sediment Samples
Banner Western Disposal Service

Metals and Cyanide	Sample Number							
	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Background								
Aluminum	1630 J	6720 J	9570 J	9080 J	3750 J	8170 J	11500 J	9480 J
Antimony	0.49 B	1.3 B	8.4 B	1.1 B	0.56 U	2.3 B	0.83 B	1.1 B
Arsenic	4.5	8.4	21.2	10.1	6.2	30.1	8.1	14.2
Barium	14.3 B	59.3	307	78.2	26.3 B	175	84.6	95.5
Beryllium	0.18 U	0.25 U	0.44 U	0.32 U	0.28 U	0.38 U	0.31 U	0.36 U
Cadmium	0.37 B	0.59 B	65.4	4.6	0.92 B	9.8	2.5	4.3
Calcium	151000	76400	28300	35300	65200	43800	42200	61900
Chromium	3.8	13.9	523	51.4	11.1	136	34.5	29.7
Cobalt	4.1 B	8.8 B	10.5 B	6.9 B	5.4 B	8.0 B	9.7 B	11.3 B
Copper	4.5 B	16.7	408	38.4	10.2	174	56.9	38.9
Iron	7240	19500	23200	26400	11300	20100	20200	22200
Lead	3.9	24.5	564	49.1	12.2	443	50.2	34.4
Magnesium	84000	36000	14800	18800	32000	22300	21000	25000
Manganese	419 JN	496 JN	261 JN	263 JN	401 JN	383 JN	304 JN	689 JN
Mercury	0.10 U	0.14 U	5.2	0.89	0.12 U	4.1	0.25	0.17 U
Nickel	6.0 B	19.4	105	20.1	10.8 B	32.8	29.5	36.6
Potassium	1200 JE	2980 JE	2960 JE	2060 JE	1390 JBE	1640 JBE	3140 JE	2770 JE
Selenium	0.55 U	0.76 U	2.1 B	0.95 U	0.85 U	1.5 B	0.93 U	1.3 B
Silver	0.18 U	0.25 U	11.6	0.99 B	0.28 U	4.3	0.51 B	0.51 B
Sodium	225 B	2130	1510 B	547 B	439 B	314 B	371 B	289 B
Thallium	0.55 B	0.76 U	1.3 U	1.0 U	0.85 U	1.2 U	0.93 U	1.1 U
Vanadium	6.5 B	15.7	23.0	26.4	16.4	21.8	26.2	22.0
Zinc	19.6	67.1	2380	195	61.3	826	205	398
Cyanide	2.0 U	2.2 U	8.3	2.2 U	2.1 U	2.8 U	3.6 U	3.8 U

BANNER TABLE C-4 SEDIMENT WK4

Table 3-2
Key Sample Summary

Substance	Sediment (Concentrations in $\mu\text{g}/\text{kg}$; Metals in mg/kg)						Sample Number
	ST01 Background	ST02	ST03	ST04	ST05	ST06	
Acetone	13 UJB	97B					
1,1-Dichloroethane	13 U	23					
Toluene	13 U	35	23 J				
Ethylbenzene	13 U	45	74 J				
Xylene (total)	13 U	83	260 J	97 J			
Naphthalene	430 U			1,600			
2-Methylnaphthalene	430 U			840			
Acenaphthylene	430 U			650		820	
Fluorene	430 U			540 J			
Phenanthrene	58 J			4,900		1,200	300 J
Anthracene	430 U			2,100			400 J
Fluoranthene	95 J			10,000 D		2,400	820
Pyrene	110 J			15,000 D		4,100 D	1,000
Benzo(a)anthracene	52 J			4,700		3,500	800
Chrysene	73 J			9,100 D		4,400	1,000
Bis(2-Ethyhexyl)phthalate	430 U			9,400 JBD			
Benzo(b)fluoranthene	49 J			14,000		4,200 D	1,400

Table 3-2
Key Sample Summary

Sediment
(Concentrations in $\mu\text{g}/\text{kg}$; Metals in mg/kg)

Substance	Sample Number							
	ST01 Background	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Benzo(a)pyrene	54 J			8,000 D	+ 160 J	4,500 D	990	570 J
Indeno(1,2,3-cd)pyrene	34 J			7,700 D	140 J	3,200	760	360 J
Dibenz(a,h)anthracene	430 U			850		1,400		
Benzo(g,h,i)perylene	34 J			7,600 D		2,800		
Delta-BHC	2.2 U			6.3 JP				
Gamma-BHC (Lindane)	2.2 U			27 JP				
Aldrin	2.2 U	4.8 P		22 JP				
Dieldrin	4.3 U			57 JP		39 JP		
4,4'-DDE	4.3 U			82 JP				
Endrin	4.3 U			56 JDP		53 J	7.9 P	6.9 JP
Endosulfan II	4.3 U			44 JP				
4,4'-DDD	4.3 U			100 JP				5.6 P
Endosulfan sulfate	4.3 U			27 JP				
4,4'-DDT	4.3 U			61 JP		22 J	8.6 P	
Methoxychlor	22 U			150 J				
Endrin ketone	4.3 U			96 J		13 JP	9.0	
Endrin aldehyde	4.3 U	7.5	4.4 P	97 JP				23 P

Table 3-2
Key Sample Summary

Substance	Background	Sediment						Sample Number	
		ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Alpha-chlordane	2.2 U	3.0		39 JP					
Gamma-chlordane	2.2 U			37 JP					
Aroclor-1254	43 U	210 C		9,900 UX					
Metals									
Aluminum	1,630 J	6,720 J	9,570 J	9,080 J			8,170 J	11,500 J	9,480 J
Arsenic	4.5		21.2				30.1		14.2
Barium	14.3 B	59.3	307	78.2			175	84.6	95.5
Cadmium	0.37 B		65.4	4.6			9.8	2.5	4.3
Chromium	3.8	13.9	523	51.4			136	34.5	29.7
Copper	4.5 B	16.7	408	38.4			174	56.9	38.9
Iron	7,240		23,200	26,400					22,200
Lead	3.9	24.5	564	49.1	12.2	443		50.2	34.4
Mercury	0.10 U		5.2	0.89			4.1	0.25	
Nickel	6.0 B	19.4	105	20.1			32.8	29.5	36.6
Selenium	0.55 U		2.1 B				1.5 B		1.3 B
Silver	0.18 U		11.6	0.99 B			4.3		
Sodium	225 B	2,130	1,510 B						

Table 3-2
Key Sample Summary

		Sediment (Concentrations in $\mu\text{g}/\text{kg}$; Metals in mg/kg)						
		Sample Number						
Substance	Background	ST02	ST03	ST04	ST05	ST06	ST07	ST08
Vanadium	6.5 B		23.0	26.4		21.8	26.2	22.0
Zinc	19.6	67.1	2,380	195	61.3	826	205	398
Cyanide	2.0 U		8.3					

Notes:

- J Reported value is estimated.
- U Substance is undetected. The reported value is the contract required quantitation limit (CRQL).
- P Greater than 25 percent difference for detected concentrations.
- C Identification has been confirmed by GC/MS.
- X Other specific flags may be required to properly define the results.
- D Compound identified in an analysis at a secondary dilution factor.
- B Analyte found in the associated blank as well as in the sample.

APPENDIX F

CERCLA Site Team Evaluation Prioritization Data

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Region V CLP Data
Received for Review on

Aug 16, 1996

FROM: Stephen L. Ostroda, Chief (HSRL-5J)
Superfund Technical Support Section

*for Steve Ostroda
Richard Z. Byrnes
9/16/96*

TO: Data User:

IEPA

We have reviewed the data for the following case:

SITE NAME: Banner Western Disp (IL)

CASE NUMBER: 24831 SDG NUMBER: EBHK2

Number and Type of Samples: 11 (Soil)

Sample Numbers: EBHK2-9 EBHQ, 7-8

Laboratory: ATAS Hrs. for Review: 11.5

Following are our findings:
1.0
12.5 user

The data are useable and acceptable with the qualifications described in the attached narrative.

*Richard Z. Byrnes
9/16/96*

RECEIVED

SEP 20 1996

IEPA/DLPC

cc: Regional TPO
Brian Freeman
HSMC-5J

Laboratory: ATAS

Case: 24831

Site: BANNER WESTERN DISPOSAL (IL)

SDG: EBHK2

Below is a summary of the out-of-control audits and the possible effect on the data for this case:

A total of eleven (11) soil samples numbered EBHK2 through EBHK9, EBHL0, EBHL7 and EBHL8 were collected on 07-09-96 and 07-10-96. American Technical and Analytical Services, Inc. (ATAS) of Maryland Heights, MO received the samples on 07-11-96 intact and in good condition. All samples were analyzed for all three fractions according to CLP SOW OLM03.2.

Soil sample EBHK2 was used as the low level MS/MSD samples for all three fractions.

No samples were identified as either trip blanks, field blanks or field duplicates.

All VOA analyses of soil samples were performed within the technical holding time of 14 days after sample collection; therefore the results are acceptable. All semivolatile extractions of the soil samples, except soil sample EBHK2, were performed within fourteen (14) days from sample collection and all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable. Soil sample EBHK2 was extracted twenty (20) days after sample collection; therefore all positive detects are qualified as estimated, "J" and non-detects as "UJ". All pesticide extractions of the soil samples were performed within fourteen (14) days from sample collection and all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable.

Reviewed by: Allison C. Harvey _____ Lockheed-Martin/ESAT
Date: September 4, 1996

Laboratory: ATAS

Case: 24831

Site: BANNER WESTERN DISPOSAL (IL)

SDG: EBHK2

1. HOLDING TIME

A total of eleven (11) soil samples numbered EBHK2 through EBHK9, EBHL0, EBHL7 and EBHL8 were collected on 07-09-96 and 07-10-96. American Technical and Analytical Services, Inc. (ATAS) of Maryland Heights, MO received the samples on 07-11-96 intact and in good condition. All samples were analyzed for all three fractions according to CLP SOW OLM03.2.

All VOA analyses of soil samples were performed within the technical holding time of 14 days after sample collection; therefore the results are acceptable. All semivolatile extractions of the soil samples, except soil sample EBHK2, were performed within fourteen (14) days from sample collection and all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable. Soil sample EBHK2 was extracted twenty (20) days after sample collection; therefore all positive detects are qualified as estimated, "J" and non-detects as "UJ". All pesticide extractions of the soil samples were performed within fourteen (14) days from sample collection and all analyses were performed within forty (40) days after extraction; therefore, the results are acceptable.

2. GC/MS TUNING AND GC INSTRUMENT PROCEDURE

VOA: All GC/MS tuning complied with the mass list and ion abundance criteria for BFB, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

SV: All GC/MS tuning complied with the mass list and ion abundance criteria for DFTPP, and all samples were analyzed within the twelve (12) hour periods for instrument performance checks.

Pest/PCB: All GC Resolution Check Mixtures met the 60% resolution criteria. Endrin and DDT degradation checks using PEM Mix on the CP-SIL19CB and DB-17 columns were <20%; therefore, the results are acceptable.

The Florisil Cartridge Check and GPC Calibration Check met the QC criteria; therefore, the results are acceptable.

Reviewed by: Allison C. Harvey _____ Lockheed-Martin/ESAT

Date: September 4, 1996

Laboratory: ATAS**Case:** 24831**Site:** BANNER WESTERN DISPOSAL (IL)**SDG:** EBHK2**3. CALIBRATION:**

Initial and continuing calibrations of the volatile, semivolatile and pesticide/PCB standards were evaluated for the target compounds list and outliers were recorded on the outlier forms included as a part of this narrative.

4. BLANKS

VOA: VBLKCK is the water volatile method blank and VBLKDM, VBLKDN and VBLKDO are the three (3) low level soil volatile method blanks. Water method blank VBLKCK and soil method blank VBLKDM contained no target analytes and no TICs. Soil method blank VBLKDO contained no target analytes and one (1) TIC. Soil method blank VBLKDN contained Methylene Chloride at $3\mu\text{g}/\text{Kg}$, and one (1) TIC. The presence of Methylene Chloride, a common laboratory contaminant, in the samples associated with method blank, VBLKDN, is qualified as undetected "U", when the sample result is less than ten (10) times the blank result. The presence of any of the TICs in the samples associated with method blanks, VBLKDN and VBLKDO, is qualified as undetected "U", when the sample result is less than five (5) times the blank result. VHBLKCK is the volatile storage blank, it contained one (1) TCL and one (1) TIC. The volatile method blank summaries (FORM IV VOA) list the samples associated with each blank.

SV: SBLKAW, SBLKED and SBLKEU are the three (3) low level soil semivolatile method blanks. Soil method blank SBLKAW contained bis (2-Ethylhexyl)phthalate at $39\mu\text{g}/\text{Kg}$, and three (3) TICs. Soil method blank SBLKED contained bis(2-Ethylhexyl)phthalate at $37\mu\text{g}/\text{Kg}$, and two (2) TICs. Soil method blank SBLKEU contained Di-n-octylphthalate at $37\mu\text{g}/\text{Kg}$, and three (3) TICs. The presence of bis(2-Ethylhexyl)phthalate, a common laboratory contaminant, in the samples associated with the method blanks SBLKAW and SBLKED, is qualified as undetected "U", when the sample result is less than ten (10) times the blank result. The presence of Di-n-octylphthalate, a common laboratory contaminant, in the samples associated with the method blank, SBLKEU, is qualified as undetected "U", when the sample result is less than ten (10) times the blank result. The presence of any of the TICs in the samples associated with method blanks, SBLKAW, SBLKED and SBLKEU, is qualified as undetected "U", when the sample result is less than five (5) times the blank result. The semivolatile method blank summaries (FORM IV SV) list the samples associated with each blank.

Reviewed by: Allison C. Harvey _____ Lockheed-Martin/ESAT
Date: September 4, 1996

Laboratory: ATAS **Case:** 24831
Site: BANNER WESTERN DISPOSAL (IL) **SDG:** EBHK2

Pest/PCB: PBLK1S is the soil pesticide method blank. Method blank PBLK1S contained Heptachlor at 0.16 µg/Kg. The presence of Heptachlor in the samples associated with method blank, PBLK1S, is qualified as undetected "U", when the sample result is less than five (5) times the blank result. The pesticide method blank summary (FORM IV PEST) lists the samples associated with the blank.

There were four (4) pesticide instrument blanks. No samples were associated with the instrument blanks.

5. SYSTEM MONITORING COMPOUND AND SURROGATE RECOVERY

VOA: The recoveries of all volatile system monitoring compounds were within QC limits for the low level water samples; therefore, the results are acceptable.

The recoveries of all volatile system monitoring compounds were within QC limits for the low level soil samples; therefore, the results are acceptable.

SV: The recoveries of all semivolatile surrogate compounds were within QC limits for the low level soil samples; therefore, the results are acceptable.

Pest/PCB: TCX, Tetrachloro-m-xylene and DCB, Decachlorobiphenyl, reported percent recoveries as diluted out and above the upper QC limit on both GC columns for soil sample EBHK5. The high recoveries observed for soil sample EBHK5 may be an indication of co-eluting interferences; therefore detected target analytes should be qualified as estimated, "J". Non-detected pesticide target analytes in soil sample EBHK5 require no qualification.

6. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Soil sample EBHK2 was used as the low level MS/MSD samples for all three fractions.

VOA: All spike recoveries and RPDs were within the QC limits for the low level soil sample EBHK2; therefore, the results are acceptable.

SV: The % recoveries of Phenol were reported above the upper QC limit but less than (<) 100% for soil samples EBHK2MS and EBHK2MSD. The presence of Phenol in the unspiked sample, EBHK2, requires no qualification and the laboratory is commended for

Reviewed by: Allison C. Harvey _____ Lockheed-Martin/ESAT
Date: September 4, 1996

Laboratory: ATAS

Case: 24831

Site: BANNER WESTERN DISPOSAL (IL)

SDG: EBHK2

having performed as excellent job.

Pest/PCB: All spike recoveries and RPDs were within the QC limits for the soil sample EBHK2; therefore, the results are acceptable.

7. FIELD BLANK AND FIELD DUPLICATE

No samples were identified as either trip blanks, field blanks or field duplicates.

8. INTERNAL STANDARDS

VOA: The area counts for IS1 (BCM), Bromochloromethane, were below the lower QC limit for soil samples EBHK2MS, EBHK3, EBHK3RE, EBHK9, and EBHK9RE. The area counts for IS2 (DFB), 1,4-Difluorobenzene, were below the lower QC limit for soil samples EBHK2MS, EBHK3RE, EBHK9, and EBHK9RE. The area count for IS2 was less than 50% of the lower QC limit for soil sample EBHK3. The area counts for IS3 (CBZ), Chlorobenzene-d5, were below the lower QC limit for soil samples EBHK2MS, EBHK3RE and EBHK9. The area counts for IS3 were less than 50% of the lower QC limit for soil samples EBHK3 and EBHK9RE. Detected target analytes quantitated on IS1, IS2, and IS3 in soil samples EBHK2MS, EBHK3RE, and EBHK9 should be qualified as estimated "J" and non-detects as "UJ". Detected target analytes quantitated on IS1 in soil samples EBHK3 and EBHK9RE should be qualified as estimated "J" and non-detects as "UJ". Detected target analytes quantitated on IS2 in soil sample EBHK9RE should be qualified as estimated "J" and non-detects as "UJ". Detected target analytes quantitated on IS2 in soil sample EBHK3 should be qualified as estimated "J" and non-detects as unusable "R". Detected target analytes quantitated on IS3 in soil samples EBHK3 and EBHK9RE should be qualified as estimated "J" and non-detects as unusable "R".

SV: The area counts for IS1 (DCB), 1,4-Dichlorobenzene-d4; IS2 (NPT), Naphthalene-d8; IS3 (ANT), Acenaphthene-d10; and IS4 (PHN), Phenanthrene-d10, were above the upper QC limit for soil samples EBHL8 and EBHL8RE. Detected target analytes quantitated on IS1, IS2, IS3, and IS4 in soil samples EBHL8 and EBHL8RE should be qualified as estimated "J". Non-detected compounds do not require qualification.

9. COMPOUND IDENTIFICATION:

After reviewing the mass spectra and chromatograms it appears that all VOA, SV and Pesticide/PCB compounds were correctly identified.

Reviewed by: Allison C. Harvey _____ Lockheed-Martin/ESAT
Date: September 4, 1996

Laboratory: ATAS **Case:** 24831
Site: BANNER WESTERN DISPOSAL (IL) **SDG:** EBHK2

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

Soils - All CRQLs were properly adjusted for percent moisture; therefore all VOA, SV and Pesticide target CRQLs were properly reported. All target compound quantitation was properly reported.

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance. The GC baseline for the pesticide analysis was acceptable.

12. ADDITIONAL INFORMATION

VOA: Soil samples EBHK3 and EBHK9 reported at least one internal standard area count outside the QC limits. The samples were reanalyzed as per SOW OLM03.2. The area counts for the reanalyzed samples were also outside the QC limits; therefore, the data was qualified using the results of the original analyses.

SV: Soil sample EBHL8 reported at least one internal standard area count outside the QC limits. The sample was reanalyzed as per SOW OLM03.2. The area count for the reanalyzed sample was also outside the QC limits; therefore, the data was qualified using the results of the original analysis.

Reviewed by: Allison C. Harvey ____ Lockheed-Martin/ESAT
Date: September 4, 1996



ORGANIC DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utilized in this document, the following code letters and associated definitions are provide:

VALUE-if the results is a value greater than or equal to the Contract Required Quantitation Limit (CRQL).

- U** Indicates that the compound was analyzed for, but not detected. The sample quantitation limit corrected for dilution and percent moisture is reported.
- J** Indicates an estimated value. This flag is used either when estimating a concentration for a tentatively identified compound or when the data indicates the presence of a compound but the result is less than the sample quantitation limit, but greater than zero. The flag is also used to indicate a reported result having an associated QC problem.
- R** Indicates the data are unusable. (Note: The analyte may or may not be present.)
- N** Indicates presumptive evidence of a compound. This flag is only used for a tentatively identified compound, where the identification is based on a mass spectral library search.
- P** Indicates a pesticide/Aroclor target analyte when there is greater than 25% difference for the detected concentrations between the two GC columns. The lower of the two results is reported.
- C** Indicates pesticide results that have been confirmed by GC/MS.
- B** Indicates the analyte is detected in the associated blank as well as the sample.
- E** Indicates compounds whose concentrations exceed the calibration range of the instrument.
- D** Indicates an identified compound in an analysis has been diluted. This flag alerts the data user to any differences between the concentrations reported in the two analysis.
- A** Indicates tentatively identified compounds that are suspected to be aldol condensation products.
- G** Indicates the TCLP Matrix Spike Recovery was greater than the upper limit of the analytical method.
- L** Indicates the TCLP Matrix Spike Recovery was less than the lower limit of the analytical method.
- T** Indicates the analyte is found in the associated TCLP extraction blank as well as in the sample.
- X, Y, Z** are reserved for laboratory defined flags.



AMERICAN TECHNICAL & ANALYTICAL SERVICES, INC.
875 FEE FEE ROAD
MARYLAND HEIGHTS, MISSOURI 63043
(314) 434-4570

SDG NARRATIVE

CONTRACT: **68-D5-0018**

CASE: **24831**

SDG #: **EBHK2**

REGION: **V**

The samples listed below were received in good condition on July 14, 1996.

<u>ATAS ID</u>	<u>EPA SAMPLE ID</u>	<u>MATRIX</u>
16199.01	EBHK2	SOIL
16199.02	EBHK2MS	SOIL
16199.03	EBHK2MSD	SOIL
16199.04	EBHK3	SOIL
16199.05	EBHK4	SOIL
16199.06	EBHK5	SOIL
16199.07	EBHK6	SOIL
16199.08	EBHK7	SOIL
16199.09	EBHK8	SOIL
16199.10	EBHK9	SOIL
16199.11	EBHL0	SOIL
16199.12	EBHL7	SOIL
16199.13	EBHL8	SOIL

VOLATILE SAMPLE ANALYSIS:

The samples were analyzed following CLP SOW (OLM03.2).

The trap used for Volatile analysis is: Tekmar OV-1/Tenax/Silica, with 1 cm of OV-1, 15 cm of Tenax and 8 cm of Silica.

The column used for Volatile analysis is: J & W DB-624, 75 meter, 0.53 mm ID, 3 micron film thickness.

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Samples EBHK3 and EBHK9 had low internal standard area. These samples were re-analyzed confirming the low area obtained in the original sample analysis. Both the original run and the re-inject are reportable and billable.

SEMIVOLATILE SAMPLE ANALYSIS:

The samples were analyzed following CLP SOW (OLM03.2).

The column used for Semivolatile analyses is: Restek XTI-5 (bonded 5% phenyl-95% dimethyl polysiloxane), 30m, 0.25 mm ID, 1.0 micron film thickness.

The following samples had alkane reports and these reports are at the back of this narrative: SBLKAW, SBLKEU, SBLKED, EBHK2, EBHK3, EBHK4, EBHK5, EBHK6, EBHK7, EBHK8, EBHK9, EBHL0, EBHL7, EBHL8 and EBHL8RE.

Sample EBHL8 had low internal standard area. This sample was re-analyzed confirming the low area obtained in the original sample analysis. Both the original run and the re-inject are reportable and billable.

Sample EBHK2 was re-extracted out of hold time. The original extract had surrogates outside of the acceptable limits.

PESTICIDE/PCB SAMPLE ANALYSIS:

The samples were analyzed following CLP SOW (OLM03.2).

The columns used for this Pesticide/PCB analysis are: GC-5: J&W DB-1701, 30 meter, 0.32 mm ID, 0.25 micron film thickness and J&W DB-17, 30 meter, 0.32 mm ID, 0.25 micron film thickness. GC-1: Chrompack CP-SIL19CB, 30 meter, 0.32 mm ID, 0.25 micron film thickness and J&W DB-17, 30 meter, 0.32 mm ID, 0.25 micron film thickness.

Sulfur cleanup was performed on all samples and PBLK1S is the associated blank.

Samples EBHK4, EBHK5, EBHK6, EBHK7 and EBHK8 were all run at a 1:5 or a 1:10 dilution due to matrix interferences. A previous analysis of the samples led to phase destruction on both GC columns.

Sample EBHK5 had all surrogate recoveries outside of advisory limits. Sample was run as a 1:10 dilution due to heavy matrix interferences.

Some single-component target compounds were not reported due to co-elution with aroclors. The Pesticide Residue Expert determined which target compounds were false positives due to the aroclors present.

000002

MISCELLANEOUS:

The CAS numbers on some of the TIC compounds may be 0-00-0. The NBS 75K library database does not have the correct CAS number for these compounds and it assigns "0-00-0" as the CAS number.

All manual integrations in this data package for Volatile, Semivolatile and Pesticide/PCB analysis have been performed for one of the following reasons.

- a. Data system missed peak during acquisition.
- b. Data system improperly integrated peak.

The manual integrations in this data package are placed behind their associated standards or samples.

ADDITIONAL BILLABLES:

VOLATILE ANALYSIS	SEMIVOLATILE ANALYSIS	PESTICIDE/PCB ANALYSIS
EBHK3RE(Rinject)	EBHL8RE(Rinject)	None
EBHK9RE(Rinject)		

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his designee, as verified by the following signature.



Robert Wilhelm
Laboratory Manager

August 14, 1996

000003

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKCK

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) WATER Lab Sample ID: .071796-01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C6529.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/L	Q
74-87-3-----	Chloromethane	10	U	
74-83-9-----	Bromomethane	10	U	
75-01-4-----	Vinyl Chloride	10	U	
75-00-3-----	Chloroethane	10	U	
75-09-2-----	Methylene Chloride	10	U	
67-64-1-----	Acetone	10	U	
75-15-0-----	Carbon Disulfide	10	U	
75-35-4-----	1,1-Dichloroethene	10	U	
75-34-3-----	1,1-Dichloroethane	10	U	
540-59-0-----	1,2-Dichloroethene (total)	10	U	
67-66-3-----	Chloroform	10	U	
107-06-2-----	1,2-Dichloroethane	10	U	
78-93-3-----	2-Butanone	10	U	
71-55-6-----	1,1,1-Trichloroethane	10	U	
56-23-5-----	Carbon Tetrachloride	10	U	
75-27-4-----	Bromodichloromethane	10	U	
78-87-5-----	1,2-Dichloropropane	10	U	
10061-01-5-----	cis-1,3-Dichloropropene	10	U	
79-01-6-----	Trichloroethene	10	U	
124-48-1-----	Dibromochloromethane	10	U	
79-00-5-----	1,1,2-Trichloroethane	10	U	
71-43-2-----	Benzene	10	U	
10061-02-6-----	trans-1,3-Dichloropropene	10	U	
75-25-2-----	Bromoform	10	U	
108-10-1-----	4-Methyl-2-Pentanone	10	U	
591-78-6-----	2-Hexanone	10	U	
127-18-4-----	Tetrachloroethene	10	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U	
108-88-3-----	Toluene	10	U	
108-90-7-----	Chlorobenzene	10	U	
100-41-4-----	Ethylbenzene	10	U	
100-42-5-----	Styrene	10	U	
1330-20-7-----	Xylene (Total)	10	U	

000258

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

VBLKCK

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) WATER Lab Sample ID: 071796-01

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C6529.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

Number TICs found: 0

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKDM

' Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071296-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5653.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

000257

FORM I VOA

OLM3.0

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

VBLKDM

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071296-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5653.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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00025S

FORM I VOA-TIC

OLM3.C

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKDN

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071596-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5673.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	3	J
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

VBLKDN

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071596-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5673.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.308	11	NJ
2.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: ATAS, INC.

Contract: 68-D5-0018

VBLKDO

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071796-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5691.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
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74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	10	U
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

VBLKDO

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071796-01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5691.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. 0 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.303	7	NJ
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: ATAS, INC.

Contract: 68-D5-0018

VHBLKCK

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) WATER Lab Sample ID: 16199.14

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C6538.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Q

74-87-3-----	Chloromethane	10	U
74-83-9-----	Bromomethane	10	U
75-01-4-----	Vinyl Chloride	10	U
75-00-3-----	Chloroethane	10	U
75-09-2-----	Methylene Chloride	3	J
67-64-1-----	Acetone	10	U
75-15-0-----	Carbon Disulfide	10	U
75-35-4-----	1,1-Dichloroethene	10	U
75-34-3-----	1,1-Dichloroethane	10	U
540-59-0-----	1,2-Dichloroethene (total)	10	U
67-66-3-----	Chloroform	10	U
107-06-2-----	1,2-Dichloroethane	10	U
78-93-3-----	2-Butanone	10	U
71-55-6-----	1,1,1-Trichloroethane	10	U
56-23-5-----	Carbon Tetrachloride	10	U
75-27-4-----	Bromodichloromethane	10	U
78-87-5-----	1,2-Dichloropropane	10	U
10061-01-5-----	cis-1,3-Dichloropropene	10	U
79-01-6-----	Trichloroethene	10	U
124-48-1-----	Dibromochloromethane	10	U
79-00-5-----	1,1,2-Trichloroethane	10	U
71-43-2-----	Benzene	10	U
10061-02-6-----	trans-1,3-Dichloropropene	10	U
75-25-2-----	Bromoform	10	U
108-10-1-----	4-Methyl-2-Pentanone	10	U
591-78-6-----	2-Hexanone	10	U
127-18-4-----	Tetrachloroethene	10	U
79-34-5-----	1,1,2,2-Tetrachloroethane	10	U
108-88-3-----	Toluene	10	U
108-90-7-----	Chlorobenzene	10	U
100-41-4-----	Ethylbenzene	10	U
100-42-5-----	Styrene	10	U
1330-20-7-----	Xylene (Total)	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLKCK

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) WATER Lab Sample ID: 16199.14

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: C6538.D

Level: (low/med) LOW Date Received: / /

% Moisture: not dec. Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	7.718	8	NJ
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK2

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5661.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 19 Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
74-87-3-----	Chloromethane	12	U	
74-83-9-----	Bromomethane	12	U	
75-01-4-----	Vinyl Chloride	12	U	
75-00-3-----	Chloroethane	12	U	
75-09-2-----	Methylene Chloride	12	J	
67-64-1-----	Acetone	13		
75-15-0-----	Carbon Disulfide	12	U	
75-35-4-----	1,1-Dichloroethene	12	U	
75-34-3-----	1,1-Dichloroethane	12	U	
540-59-0-----	1,2-Dichloroethene (total)	12	U	
67-66-3-----	Chloroform	12	U	
107-06-2-----	1,2-Dichloroethane	12	U	
78-93-3-----	2-Butanone	12	U	
71-55-6-----	1,1,1-Trichloroethane	12	U	
56-23-5-----	Carbon Tetrachloride	12	U	
75-27-4-----	Bromodichloromethane	12	U	
78-87-5-----	1,2-Dichloropropane	12	U	
10061-01-5-----	cis-1,3-Dichloropropene	12	U	
79-01-6-----	Trichloroethene	12	U	
124-48-1-----	Dibromochloromethane	12	U	
79-00-5-----	1,1,2-Trichloroethane	12	U	
71-43-2-----	Benzene	12	U	
10061-02-6-----	trans-1,3-Dichloropropene	12	U	
75-25-2-----	Bromoform	12	U	
108-10-1-----	4-Methyl-2-Pentanone	12	U	
591-78-6-----	2-Hexanone	12	U	
127-18-4-----	Tetrachloroethene	12	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	12	U	
108-88-3-----	Toluene	12	U	
108-90-7-----	Chlorobenzene	12	U	
100-41-4-----	Ethylbenzene	12	U	
100-42-5-----	Styrene	12	U	
1330-20-7-----	Xylene (Total)	12	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK2

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.01

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5661.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 19 Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-05-8	Acetonitrile	8.324	19	NJ
2. 110-54-3	Hexane	9.347	33	NJ
3.	Unknown	14.543	7	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK3

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.04

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D5664.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: not dec. 35

Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO. COMPOUND

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	15	U
74-83-9-----	Bromomethane	15	U
75-01-4-----	Vinyl Chloride	15	U
75-00-3-----	Chloroethane	15	U
75-09-2-----	Methylene Chloride	13	J
67-64-1-----	Acetone	15	U
75-15-0-----	Carbon Disulfide	15	U
75-35-4-----	1,1-Dichloroethene	15	U
75-34-3-----	1,1-Dichloroethane	15	U
540-59-0-----	1,2-Dichloroethene (total)	15	U
67-66-3-----	Chloroform	15	U
107-06-2-----	1,2-Dichloroethane	15	U
78-93-3-----	2-Butanone	15	U
71-55-6-----	1,1,1-Trichloroethane	15	U
56-23-5-----	Carbon Tetrachloride	15	U
75-27-4-----	Bromodichloromethane	15	U
78-87-5-----	1,2-Dichloropropane	15	U
10061-01-5-----	cis-1,3-Dichloropropene	15	U
79-01-6-----	Trichloroethene	15	U
124-48-1-----	Dibromochloromethane	15	U
79-00-5-----	1,1,2-Trichloroethane	15	U
71-43-2-----	Benzene	15	U
10061-02-6-----	trans-1,3-Dichloropropene	15	U
75-25-2-----	Bromoform	15	U
108-10-1-----	4-Methyl-2-Pentanone	15	U
591-78-6-----	2-Hexanone	15	U
127-18-4-----	Tetrachloroethene	15	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15	U
108-88-3-----	Toluene	15	U
108-90-7-----	Chlorobenzene	15	U
100-41-4-----	Ethylbenzene	15	U
100-42-5-----	Styrene	15	U
1330-20-7-----	Xylene (Total)	15	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK3

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5664.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 35 Date Analyzed: 07/12/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK3RE

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5674.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 35 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	15	U
74-83-9-----	Bromomethane	15	U
75-01-4-----	Vinyl Chloride	15	U
75-00-3-----	Chloroethane	15	U
75-09-2-----	Methylene Chloride	15	U
67-64-1-----	Acetone	15	U
75-15-0-----	Carbon Disulfide	15	U
75-35-4-----	1,1-Dichloroethene	15	U
75-34-3-----	1,1-Dichloroethane	15	U
540-59-0-----	1,2-Dichloroethene (total)	15	U
67-66-3-----	Chloroform	15	U
107-06-2-----	1,2-Dichloroethane	15	U
78-93-3-----	2-Butanone	15	U
71-55-6-----	1,1,1-Trichloroethane	15	U
56-23-5-----	Carbon Tetrachloride	15	U
75-27-4-----	Bromodichloromethane	15	U
78-87-5-----	1,2-Dichloropropane	15	U
10061-01-5-----	cis-1,3-Dichloropropene	15	U
79-01-6-----	Trichloroethene	15	U
124-48-1-----	Dibromochloromethane	15	U
79-00-5-----	1,1,2-Trichloroethane	15	U
71-43-2-----	Benzene	15	U
10061-02-6-----	trans-1,3-Dichloropropene	15	U
75-25-2-----	Bromoform	15	U
108-10-1-----	4-Methyl-2-Pentanone	15	U
591-78-6-----	2-Hexanone	15	U
127-18-4-----	Tetrachloroethene	15	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15	U
108-88-3-----	Toluene	15	U
108-90-7-----	Chlorobenzene	15	U
100-41-4-----	Ethylbenzene	15	U
100-42-5-----	Styrene	15	U
1330-20-7-----	Xylene (Total)	15	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK3RE

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.04

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5674.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 35 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK4

> Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5675.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 41 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	17	U
74-83-9-----	Bromomethane	17	U
75-01-4-----	Vinyl Chloride	17	U
75-00-3-----	Chloroethane	17	U
75-09-2-----	Methylene Chloride	17	U
67-64-1-----	Acetone	5	J
75-15-0-----	Carbon Disulfide	17	U
75-35-4-----	1,1-Dichloroethene	17	U
75-34-3-----	1,1-Dichloroethane	17	U
540-59-0-----	1,2-Dichloroethene (total)	17	U
67-66-3-----	Chloroform	17	U
107-06-2-----	1,2-Dichloroethane	17	U
78-93-3-----	2-Butanone	17	U
71-55-6-----	1,1,1-Trichloroethane	17	U
56-23-5-----	Carbon Tetrachloride	17	U
75-27-4-----	Bromodichloromethane	17	U
78-87-5-----	1,2-Dichloropropane	17	U
10061-01-5-----	cis-1,3-Dichloropropene	17	U
79-01-6-----	Trichloroethene	17	U
124-48-1-----	Dibromochloromethane	17	U
79-00-5-----	1,1,2-Trichloroethane	17	U
71-43-2-----	Benzene	17	U
10061-02-6-----	trans-1,3-Dichloropropene	17	U
75-25-2-----	Bromoform	17	U
108-10-1-----	4-Methyl-2-Pentanone	17	U
591-78-6-----	2-Hexanone	17	U
127-18-4-----	Tetrachloroethene	17	U
79-34-5-----	1,1,2,2-Tetrachloroethane	17	U
108-88-3-----	Toluene	17	U
108-90-7-----	Chlorobenzene	17	U
100-41-4-----	Ethylbenzene	17	U
100-42-5-----	Styrene	17	U
1330-20-7-----	Xylene (Total)	17	U

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9.3.96

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK4

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.05

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5675.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 41 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.360	12	LNJB
2. 123-91-1	1,4-Dioxane	12.907	33	NJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK5

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5692.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 42 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
74-87-3-----	Chloromethane	17	U	
74-83-9-----	Bromomethane	17	U	
75-01-4-----	Vinyl Chloride	17	U	
75-00-3-----	Chloroethane	17	U	
75-09-2-----	Methylene Chloride	12	J	
67-64-1-----	Acetone	30		
75-15-0-----	Carbon Disulfide	17	U	
75-35-4-----	1,1-Dichloroethene	17	U	
75-34-3-----	1,1-Dichloroethane	17	U	
540-59-0-----	1,2-Dichloroethene (total)	17	U	
67-66-3-----	Chloroform	17	U	
107-06-2-----	1,2-Dichloroethane	17	U	
78-93-3-----	2-Butanone	17	U	
71-55-6-----	1,1,1-Trichloroethane	17	U	
56-23-5-----	Carbon Tetrachloride	17	U	
75-27-4-----	Bromodichloromethane	17	U	
78-87-5-----	1,2-Dichloropropane	17	U	
10061-01-5-----	cis-1,3-Dichloropropene	17	U	
79-01-6-----	Trichloroethene	17	U	
124-48-1-----	Dibromochloromethane	17	U	
79-00-5-----	1,1,2-Trichloroethane	17	U	
71-43-2-----	Benzene	17	U	
10061-02-6-----	trans-1,3-Dichloropropene	17	U	
75-25-2-----	Bromoform	17	U	
108-10-1-----	4-Methyl-2-Pentanone	17	U	
591-78-6-----	2-Hexanone	17	U	
127-18-4-----	Tetrachloroethene	17	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	17	U	
108-88-3-----	Toluene	17	U	
108-90-7-----	Chlorobenzene	17	U	
100-41-4-----	Ethylbenzene	17	U	
100-42-5-----	Styrene	17	U	
1330-20-7-----	Xylene (Total)	17	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK5

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.06

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5692.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 42 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75-05-8	Acetonitrile	8.305	16	NJ
2. 110-54-3	Hexane	9.328	30	UNJB
3.	Unknown	18.305	11	J
4.	Unknown	18.618	14	J
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK6

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5677.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 47 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----Chloromethane	19	U
74-83-9-----Bromomethane	19	U
75-01-4-----Vinyl Chloride	19	U
75-00-3-----Chloroethane	19	U
75-09-2-----Methylene Chloride	29	B
67-64-1-----Acetone	19	U
75-15-0-----Carbon Disulfide	19	U
75-35-4-----1,1-Dichloroethene	19	U
75-34-3-----1,1-Dichloroethane	19	U
540-59-0-----1,2-Dichloroethene (total)	19	U
67-66-3-----Chloroform	19	U
107-06-2-----1,2-Dichloroethane	19	U
78-93-3-----2-Butanone	19	U
71-55-6-----1,1,1-Trichloroethane	19	U
56-23-5-----Carbon Tetrachloride	19	U
75-27-4-----Bromodichloromethane	19	U
78-87-5-----1,2-Dichloropropane	19	U
10061-01-5-----cis-1,3-Dichloropropene	19	U
79-01-6-----Trichloroethene	19	U
124-48-1-----Dibromochloromethane	19	U
79-00-5-----1,1,2-Trichloroethane	19	U
71-43-2-----Benzene	19	U
10061-02-6-----trans-1,3-Dichloropropene	19	U
75-25-2-----Bromoform	19	U
108-10-1-----4-Methyl-2-Pentanone	19	U
591-78-6-----2-Hexanone	19	U
127-18-4-----Tetrachloroethene	19	U
79-34-5-----1,1,2,2-Tetrachloroethane	19	U
108-88-3-----Toluene	19	U
108-90-7-----Chlorobenzene	19	U
100-41-4-----Ethylbenzene	19	U
100-42-5-----Styrene	19	U
1330-20-7-----Xylene (Total)	19	U

act
9-3-96

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK6

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.07

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5677.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 47 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.363	14	uNJB
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK7

> Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5678.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 46 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
74-87-3-----	Chloromethane	18	U	
74-83-9-----	Bromomethane	18	U	
75-01-4-----	Vinyl Chloride	18	U	
75-00-3-----	Chloroethane	18	U	
75-09-2-----	Methylene Chloride	29	B	
67-64-1-----	Acetone	18	U	
75-15-0-----	Carbon Disulfide	18	U	
75-35-4-----	1,1-Dichloroethene	18	U	
75-34-3-----	1,1-Dichloroethane	18	U	
540-59-0-----	1,2-Dichloroethene (total)	18	U	
67-66-3-----	Chloroform	18	U	
107-06-2-----	1,2-Dichloroethane	18	U	
78-93-3-----	2-Butanone	18	U	
71-55-6-----	1,1,1-Trichloroethane	18	U	
56-23-5-----	Carbon Tetrachloride	18	U	
75-27-4-----	Bromodichloromethane	18	U	
78-87-5-----	1,2-Dichloropropane	18	U	
10061-01-5-----	cis-1,3-Dichloropropene	18	U	
79-01-6-----	Trichloroethene	18	U	
124-48-1-----	Dibromochloromethane	18	U	
79-00-5-----	1,1,2-Trichloroethane	18	U	
71-43-2-----	Benzene	18	U	
10061-02-6-----	trans-1,3-Dichloropropene	18	U	
75-25-2-----	Bromoform	18	U	
108-10-1-----	4-Methyl-2-Pentanone	18	U	
591-78-6-----	2-Hexanone	18	U	
127-18-4-----	Tetrachloroethene	18	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	18	U	
108-88-3-----	Toluene	6	J	
108-90-7-----	Chlorobenzene	18	U	
100-41-4-----	Ethylbenzene	18	U	
100-42-5-----	Styrene	18	U	
1330-20-7-----	Xylene (Total)	6	J	

act
9-5-96

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK7

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.08

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5678.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 46 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.381	54	UNJB
2.				
3.				
4.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK8

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5693.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 34 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
74-87-3-----	Chloromethane	15	U	
74-83-9-----	Bromomethane	15	U	
75-01-4-----	Vinyl Chloride	15	U	
75-00-3-----	Chloroethane	15	U	
75-09-2-----	Methylene Chloride	15	J	
67-64-1-----	Acetone	15	U	
75-15-0-----	Carbon Disulfide	15	U	
75-35-4-----	1,1-Dichloroethene	15	U	
75-34-3-----	1,1-Dichloroethane	15	U	
540-59-0-----	1,2-Dichloroethene (total)	15	U	
67-66-3-----	Chloroform	15	U	
107-06-2-----	1,2-Dichloroethane	15	U	
78-93-3-----	2-Butanone	15	U	
71-55-6-----	1,1,1-Trichloroethane	15	U	
56-23-5-----	Carbon Tetrachloride	15	U	
75-27-4-----	Bromodichloromethane	15	U	
78-87-5-----	1,2-Dichloropropane	15	U	
10061-01-5-----	cis-1,3-Dichloropropene	15	U	
79-01-6-----	Trichloroethene	15	U	
124-48-1-----	Dibromochloromethane	15	U	
79-00-5-----	1,1,2-Trichloroethane	15	U	
71-43-2-----	Benzene	15	U	
10061-02-6-----	trans-1,3-Dichloropropene	15	U	
75-25-2-----	Bromoform	15	U	
108-10-1-----	4-Methyl-2-Pentanone	15	U	
591-78-6-----	2-Hexanone	15	U	
127-18-4-----	Tetrachloroethene	15	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	15	U	
108-88-3-----	Toluene	15	U	
108-90-7-----	Chlorobenzene	15	U	
100-41-4-----	Ethylbenzene	15	U	
100-42-5-----	Styrene	15	U	
1330-20-7-----	Xylene (Total)	15	U	

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK8

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.09

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5693.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 34 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.357	30	act
2.	Unknown	10.253	10	NJB
3.				J
4.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

> Name: ATAS, INC.

Contract: 68-D5-0018

EBHK9

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5680.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 37 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
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74-87-3-----	Chloromethane	16	U	
74-83-9-----	Bromomethane	16	U	
75-01-4-----	Vinyl Chloride	16	U	
75-00-3-----	Chloroethane	16	U	
75-09-2-----	Methylene Chloride	17	B	
67-64-1-----	Acetone	16	U	
75-15-0-----	Carbon Disulfide	16	U	
75-35-4-----	1,1-Dichloroethene	16	U	
75-34-3-----	1,1-Dichloroethane	16	U	
540-59-0-----	1,2-Dichloroethene (total)	16	U	
67-66-3-----	Chloroform	16	U	
107-06-2-----	1,2-Dichloroethane	16	U	
78-93-3-----	2-Butanone	16	U	
71-55-6-----	1,1,1-Trichloroethane	16	U	
56-23-5-----	Carbon Tetrachloride	16	U	
75-27-4-----	Bromodichloromethane	16	U	
78-87-5-----	1,2-Dichloropropane	16	U	
10061-01-5-----	cis-1,3-Dichloropropene	16	U	
79-01-6-----	Trichloroethene	16	U	
124-48-1-----	Dibromochloromethane	16	U	
79-00-5-----	1,1,2-Trichloroethane	16	U	
71-43-2-----	Benzene	16	U	
10061-02-6-----	trans-1,3-Dichloropropene	16	U	
75-25-2-----	Bromoform	16	U	
108-10-1-----	4-Methyl-2-Pentanone	16	U	
591-78-6-----	2-Hexanone	16	U	
127-18-4-----	Tetrachloroethene	16	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	16	U	
108-88-3-----	Toluene	7	J	.
108-90-7-----	Chlorobenzene	16	U	
100-41-4-----	Ethylbenzene	3	J	.
100-42-5-----	Styrene	16	U	
1330-20-7-----	Xylene (Total)	16		

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK9

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.10

Sample wt/vol: 5.0 (g/mL) G

Lab File ID: D5680.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: not dec. 37

Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: _____ (uL)

Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.344	29	u NJB
2.				
3.				
4.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK9RE

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5685.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 37 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	16	U
74-83-9-----	Bromomethane	16	U
75-01-4-----	Vinyl Chloride	16	U
75-00-3-----	Chloroethane	16	U
75-09-2-----	Methylene Chloride	29	U
67-64-1-----	Acetone	37	u B
75-15-0-----	Carbon Disulfide	16	U
75-35-4-----	1,1-Dichloroethene	16	U
75-34-3-----	1,1-Dichloroethane	16	U
540-59-0-----	1,2-Dichloroethene (total)	16	U
67-66-3-----	Chloroform	16	U
107-06-2-----	1,2-Dichloroethane	16	U
78-93-3-----	2-Butanone	16	U
71-55-6-----	1,1,1-Trichloroethane	16	U
56-23-5-----	Carbon Tetrachloride	16	U
75-27-4-----	Bromodichloromethane	16	U
78-87-5-----	1,2-Dichloropropane	16	U
10061-01-5-----	cis-1,3-Dichloropropene	16	U
79-01-6-----	Trichloroethene	16	U
124-48-1-----	Dibromochloromethane	16	U
79-00-5-----	1,1,2-Trichloroethane	16	U
71-43-2-----	Benzene	16	U
10061-02-6-----	trans-1,3-Dichloropropene	16	U
75-25-2-----	Bromoform	16	U
108-10-1-----	4-Methyl-2-Pentanone	16	U
591-78-6-----	2-Hexanone	16	U
127-18-4-----	Tetrachloroethene	16	U
79-34-5-----	1,1,2,2-Tetrachloroethane	16	U
108-88-3-----	Toluene	16	U
108-90-7-----	Chlorobenzene	16	U
100-41-4-----	Ethylbenzene	16	U
100-42-5-----	Styrene	16	U
1330-20-7-----	Xylene (Total)	16	U

act
9.3.91

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK9RE

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.10

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5685.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 37 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.364	26	u NJB
2. 75659-63-1	3,5-Dimethylamphetamine	9.840	62	NJ
3. 31295-56-4	Dodecane, 2,6,11-trimethyl-	22.120	3000	NJ
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL0

b Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5686.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 28 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
74-87-3-----	Chloromethane	14	U	
74-83-9-----	Bromomethane	14	U	
75-01-4-----	Vinyl Chloride	14	U	
75-00-3-----	Chloroethane	14	U	
75-09-2-----	Methylene Chloride	14	U	
67-64-1-----	Acetone	14	U	
75-15-0-----	Carbon Disulfide	14	U	
75-35-4-----	1,1-Dichloroethene	14	U	
75-34-3-----	1,1-Dichloroethane	14	U	
540-59-0-----	1,2-Dichloroethene (total)	14	U	
67-66-3-----	Chloroform	14	U	
107-06-2-----	1,2-Dichloroethane	14	U	
78-93-3-----	2-Butanone	14	U	
71-55-6-----	1,1,1-Trichloroethane	14	U	
56-23-5-----	Carbon Tetrachloride	14	U	
75-27-4-----	Bromodichloromethane	14	U	
78-87-5-----	1,2-Dichloropropane	14	U	
10061-01-5-----	cis-1,3-Dichloropropene	14	U	
79-01-6-----	Trichloroethene	14	U	
124-48-1-----	Dibromochloromethane	14	U	
79-00-5-----	1,1,2-Trichloroethane	14	U	
71-43-2-----	Benzene	14	U	
10061-02-6-----	trans-1,3-Dichloropropene	14	U	
75-25-2-----	Bromoform	14	U	
108-10-1-----	4-Methyl-2-Pentanone	14	U	
591-78-6-----	2-Hexanone	14	U	
127-18-4-----	Tetrachloroethene	14	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	14	U	
108-88-3-----	Toluene	5	J	.
108-90-7-----	Chlorobenzene	14	U	.
100-41-4-----	Ethylbenzene	3	J	.
100-42-5-----	Styrene	14	U	.
1330-20-7-----	Xylene (Total)	17		.

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9.3.96

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FORM I VOA

OLM3.0

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHLO

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.11

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5686.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 28 Date Analyzed: 07/15/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-91-1	1,4-Dioxane	12.944	8	NJ
2.				
3.				
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL7

> Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5694.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 35 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND		
74-87-3-----	Chloromethane	15	U
74-83-9-----	Bromomethane	15	U
75-01-4-----	Vinyl Chloride	15	U
75-00-3-----	Chloroethane	15	U
75-09-2-----	Methylene Chloride	12	J
67-64-1-----	Acetone	15	U
75-15-0-----	Carbon Disulfide	15	U
75-35-4-----	1,1-Dichloroethene	15	U
75-34-3-----	1,1-Dichloroethane	15	U
540-59-0-----	1,2-Dichloroethene (total)	15	U
67-66-3-----	Chloroform	15	U
107-06-2-----	1,2-Dichloroethane	15	U
78-93-3-----	2-Butanone	15	U
71-55-6-----	1,1,1-Trichloroethane	15	U
56-23-5-----	Carbon Tetrachloride	15	U
75-27-4-----	Bromodichloromethane	15	U
78-87-5-----	1,2-Dichloroproppane	15	U
10061-01-5-----	cis-1,3-Dichloropropene	15	U
79-01-6-----	Trichloroethene	15	U
124-48-1-----	Dibromochloromethane	15	U
79-00-5-----	1,1,2-Trichloroethane	15	U
71-43-2-----	Benzene	15	U
10061-02-6-----	trans-1,3-Dichloropropene	15	U
75-25-2-----	Bromoform	15	U
108-10-1-----	4-Methyl-2-Pentanone	15	U
591-78-6-----	2-Hexanone	15	U
127-18-4-----	Tetrachloroethene	15	U
79-34-5-----	1,1,2,2-Tetrachloroethane	15	U
108-88-3-----	Toluene	4	J
108-90-7-----	Chlorobenzene	15	U
100-41-4-----	Ethylbenzene	15	U
100-42-5-----	Styrene	15	U
1330-20-7-----	Xylene (Total)	15	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHL7

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.12

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5694.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 35 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.365	25	M NJB
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL8

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5695.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 30 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

74-87-3-----	Chloromethane	14	U
74-83-9-----	Bromomethane	14	U
75-01-4-----	Vinyl Chloride	14	U
75-00-3-----	Chloroethane	14	U
75-09-2-----	Methylene Chloride	14	U
67-64-1-----	Acetone	14	U
75-15-0-----	Carbon Disulfide	14	U
75-35-4-----	1,1-Dichloroethene	14	U
75-34-3-----	1,1-Dichloroethane	14	U
540-59-0-----	1,2-Dichloroethene (total)	14	U
67-66-3-----	Chloroform	14	U
107-06-2-----	1,2-Dichloroethane	14	U
78-93-3-----	2-Butanone	14	U
71-55-6-----	1,1,1-Trichloroethane	14	U
56-23-5-----	Carbon Tetrachloride	14	U
75-27-4-----	Bromodichloromethane	14	U
78-87-5-----	1,2-Dichloropropane	14	U
10061-01-5-----	cis-1,3-Dichloropropene	14	U
79-01-6-----	Trichloroethene	14	U
124-48-1-----	Dibromochloromethane	14	U
79-00-5-----	1,1,2-Trichloroethane	14	U
71-43-2-----	Benzene	14	U
10061-02-6-----	trans-1,3-Dichloropropene	14	U
75-25-2-----	Bromoform	14	U
108-10-1-----	4-Methyl-2-Pentanone	14	U
591-78-6-----	2-Hexanone	14	U
127-18-4-----	Tetrachloroethene	14	U
79-34-5-----	1,1,2,2-Tetrachloroethane	14	U
108-88-3-----	Toluene	14	U
108-90-7-----	Chlorobenzene	14	U
100-41-4-----	Ethylbenzene	14	U
100-42-5-----	Styrene	14	U
1330-20-7-----	Xylene (Total)	14	U

1E
 VOLATILE ORGANICS ANALYSIS DATA SHEET
 TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHL8

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 5.0 (g/mL) G Lab File ID: D5695.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 30 Date Analyzed: 07/17/96

GC Column:DB-624 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 110-54-3	Hexane	9.350	39	µNJB
2.				act
3.				q.341
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKAW

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071896-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5951.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/19/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
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108-95-2-----	Phenol	330	U
111-44-4-----	bis(-2-Chloroethyl) Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-di-n-propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethyphenol	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
111-91-1-----	bis(-2-Chloroethoxy)methane	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	330	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	830	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	830	U
131-11-3-----	Dimethylphthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	830	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

SBLKAW

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID:	071896-01
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5951.D
Level: (low/med)	LOW	Date Received:	/ /
% Moisture: 0	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed:	07/19/96
Injection Volume:	2.0(uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.0		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830	U	
100-02-7-----	4-Nitrophenol	830	U	
132-64-9-----	Dibenzofuran	330	U	
121-14-2-----	2,4-Dinitrotoluene	330	U	
84-66-2-----	Diethylphthalate	330	U	
7005-72-3-----	4-Chlorophenyl-phenylether	330	U	
86-73-7-----	Fluorene	330	U	
100-01-6-----	4-Nitroaniline	830	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U	
86-30-6-----	N-nitrosodiphenylamine (1)	330	U	
101-55-3-----	4-Bromophenyl-phenylether	330	U	
118-74-1-----	Hexachlorobenzene	330	U	
87-86-5-----	Pentachlorophenol	830	U	
85-01-8-----	Phenanthrene	330	U	
120-12-7-----	Anthracene	330	U	
86-74-8-----	Carbazole	330	U	
84-74-2-----	Di-n-butylphthalate	330	U	
206-44-0-----	Fluoranthene	330	U	
129-00-0-----	Pyrene	330	U	
85-68-7-----	Butylbenzylphthalate	330	U	
91-94-1-----	3,3'-Dichlorobenzidine	330	U	
56-55-3-----	Benzo(a)anthracene	330	U	
218-01-9-----	Chrysene	330	U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	39	J	
117-84-0-----	Di-n-octylphthalate	330	U	
205-99-2-----	Benzo(b)fluoranthene	330	U	
207-08-9-----	Benzo(k)fluoranthene	330	U	
50-32-8-----	Benzo(a)pyrene	330	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U	
53-70-3-----	Dibenzo(a,h)anthracene	330	U	
191-24-2-----	Benzo(g,h,i)perylene	330	U	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKAW

Lab Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071896-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5951.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/19/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.607	1900	ANJ
2.	Unknown	4.786	250	J
3.	Unknown	5.964	140	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

SBLKED

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID:	071896-01
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	EE7071.D
Level: (low/med)	LOW	Date Received:	/ /
% Moisture: 0	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed:	07/24/96
Injection Volume:	2.0(uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.0		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	330	U	
111-44-4-----	bis(-2-Chloroethyl) Ether	330	U	
95-57-8-----	2-Chlorophenol	330	U	
541-73-1-----	1,3-Dichlorobenzene	330	U	
106-46-7-----	1,4-Dichlorobenzene	330	U	
95-50-1-----	1,2-Dichlorobenzene	330	U	
95-48-7-----	2-Methylphenol	330	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U	
106-44-5-----	4-Methylphenol	330	U	
621-64-7-----	N-Nitroso-di-n-propylamine	330	U	
67-72-1-----	Hexachloroethane	330	U	
98-95-3-----	Nitrobenzene	330	U	
78-59-1-----	Isophorone	330	U	
88-75-5-----	2-Nitrophenol	330	U	
105-67-9-----	2,4-Dimethylphenol	330	U	
120-83-2-----	2,4-Dichlorophenol	330	U	
120-82-1-----	1,2,4-Trichlorobenzene	330	U	
91-20-3-----	Naphthalene	330	U	
106-47-8-----	4-Chloroaniline	330	U	
87-68-3-----	Hexachlorobutadiene	330	U	
111-91-1-----	bis(-2-Chloroethoxy)methane	330	U	
59-50-7-----	4-Chloro-3-Methylphenol	330	U	
91-57-6-----	2-Methylnaphthalene	330	U	
77-47-4-----	Hexachlorocyclopentadiene	330	U	
88-06-2-----	2,4,6-Trichlorophenol	330	U	
95-95-4-----	2,4,5-Trichlorophenol	830	U	
91-58-7-----	2-Chloronaphthalene	330	U	
88-74-4-----	2-Nitroaniline	830	U	
131-11-3-----	Dimethylphthalate	330	U	
208-96-8-----	Acenaphthylene	330	U	
606-20-2-----	2,6-Dinitrotoluene	330	U	
99-09-2-----	3-Nitroaniline	830	U	
83-32-9-----	Acenaphthene	330	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKED

> Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071896-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7071.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830	U	
100-02-7-----	4-Nitrophenol	830	U	
132-64-9-----	Dibenzofuran	330	U	
121-14-2-----	2,4-Dinitrotoluene	330	U	
84-66-2-----	Diethylphthalate	330	U	
7005-72-3-----	4-Chlorophenyl-phenylether	330	U	
86-73-7-----	Fluorene	330	U	
100-01-6-----	4-Nitroaniline	830	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U	
86-30-6-----	N-nitrosodiphenylamine (1)	330	U	
101-55-3-----	4-Bromophenyl-phenylether	330	U	
118-74-1-----	Hexachlorobenzene	330	U	
87-86-5-----	Pentachlorophenol	830	U	
85-01-8-----	Phenanthrene	330	U	
120-12-7-----	Anthracene	330	U	
86-74-8-----	Carbazole	330	U	
84-74-2-----	Di-n-butylphthalate	330	U	
206-44-0-----	Fluoranthene	330	U	
129-00-0-----	Pyrene	330	U	
85-68-7-----	Butylbenzylphthalate	330	U	
91-94-1-----	3,3'-Dichlorobenzidine	330	U	
56-55-3-----	Benzo(a)anthracene	330	U	
218-01-9-----	Chrysene	330	U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	37	J	
117-84-0-----	Di-n-octylphthalate	330	U	
205-99-2-----	Benzo(b)fluoranthene	330	U	
207-08-9-----	Benzo(k)fluoranthene	330	U	
50-32-8-----	Benzo(a)pyrene	330	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U	
53-70-3-----	Dibenzo(a,h)anthracene	330	U	
191-24-2-----	Benzo(g,h,i)perylene	330	U	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKED

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071896-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7071.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/24/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

Number TICs found: 2

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	5.329	1300	ANJ
2.	Unknown	6.460	130	J
3.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLKEU

Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 072996-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7235.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/29/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 08/13/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
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108-95-2-----	Phenol	330	U
111-44-4-----	bis(-2-Chloroethyl)Ether	330	U
95-57-8-----	2-Chlorophenol	330	U
541-73-1-----	1,3-Dichlorobenzene	330	U
106-46-7-----	1,4-Dichlorobenzene	330	U
95-50-1-----	1,2-Dichlorobenzene	330	U
95-48-7-----	2-Methylphenol	330	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	330	U
106-44-5-----	4-Methylphenol	330	U
621-64-7-----	N-Nitroso-di-n-propylamine	330	U
67-72-1-----	Hexachloroethane	330	U
98-95-3-----	Nitrobenzene	330	U
78-59-1-----	Isophorone	330	U
88-75-5-----	2-Nitrophenol	330	U
105-67-9-----	2,4-Dimethylphenol	330	U
120-83-2-----	2,4-Dichlorophenol	330	U
120-82-1-----	1,2,4-Trichlorobenzene	330	U
91-20-3-----	Naphthalene	330	U
106-47-8-----	4-Chloroaniline	330	U
87-68-3-----	Hexachlorobutadiene	330	U
111-91-1-----	bis(-2-Chloroethoxy)methane	330	U
59-50-7-----	4-Chloro-3-Methylphenol	330	U
91-57-6-----	2-Methylnaphthalene	330	U
77-47-4-----	Hexachlorocyclopentadiene	330	U
88-06-2-----	2,4,6-Trichlorophenol	330	U
95-95-4-----	2,4,5-Trichlorophenol	830	U
91-58-7-----	2-Chloronaphthalene	330	U
88-74-4-----	2-Nitroaniline	830	U
131-11-3-----	Dimethylphthalate	330	U
208-96-8-----	Acenaphthylene	330	U
606-20-2-----	2,6-Dinitrotoluene	330	U
99-09-2-----	3-Nitroaniline	830	U
83-32-9-----	Acenaphthene	330	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

SBLKEU

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID:	072996-01
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	EE7235.D
Level: (low/med)	LOW	Date Received:	/ /
% Moisture: 0	decanted: (Y/N) N	Date Extracted:	07/29/96
Concentrated Extract Volume:	500 (UL)	Date Analyzed:	08/13/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.0		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	830	U	
100-02-7-----	4-Nitrophenol	830	U	
132-64-9-----	Dibenzofuran	330	U	
121-14-2-----	2,4-Dinitrotoluene	330	U	
84-66-2-----	Diethylphthalate	330	U	
7005-72-3-----	4-Chlorophenyl-phenylether	330	U	
86-73-7-----	Fluorene	330	U	
100-01-6-----	4-Nitroaniline	830	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	830	U	
86-30-6-----	N-nitrosodiphenylamine (1)	330	U	
101-55-3-----	4-Bromophenyl-phenylether	330	U	
118-74-1-----	Hexachlorobenzene	330	U	
87-86-5-----	Pentachlorophenol	830	U	
85-01-8-----	Phenanthrene	330	U	
120-12-7-----	Anthracene	330	U	
86-74-8-----	Carbazole	330	U	
84-74-2-----	Di-n-butylphthalate	330	U	
206-44-0-----	Fluoranthene	330	U	
129-00-0-----	Pyrene	330	U	
85-68-7-----	Butylbenzylphthalate	330	U	
91-94-1-----	3,3'-Dichlorobenzidine	330	U	
56-55-3-----	Benzo(a)anthracene	330	U	
218-01-9-----	Chrysene	330	U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	330	U	
117-84-0-----	Di-n-octylphthalate	37	J	
205-99-2-----	Benzo(b)fluoranthene	330	U	
207-08-9-----	Benzo(k)fluoranthene	330	U	
50-32-8-----	Benzo(a)pyrene	330	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	330	U	
53-70-3-----	Dibenzo(a,h)anthracene	330	U	
191-24-2-----	Benzo(g,h,i)perylene	330	U	

(1) - Cannot be separated from Diphenylamine

001079

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

SBLKEU

› Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 072996-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7235.D

Level: (low/med) LOW Date Received: / /

% Moisture: 0 decanted: (Y/N) N Date Extracted: 07/29/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/13/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	5.031	1500	ANJ
2.	Unknown	6.164	160	J
3.	Unknown	8.214	89	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK2

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.01	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	EE7236.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 19	decanted: (Y/N) N	Date Extracted:	07/29/96
Concentrated Extract Volume:	500 (UL)	Date Analyzed:	08/13/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.9		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	410	U	
111-44-4-----	bis(-2-Chloroethyl) Ether	410	U	
95-57-8-----	2-Chlorophenol	410	U	
541-73-1-----	1,3-Dichlorobenzene	410	U	
106-46-7-----	1,4-Dichlorobenzene	410	U	
95-50-1-----	1,2-Dichlorobenzene	410	U	
95-48-7-----	2-Methylphenol	410	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	410	U	
106-44-5-----	4-Methylphenol	410	U	
621-64-7-----	N-Nitroso-di-n-propylamine	410	U	
67-72-1-----	Hexachloroethane	410	U	
98-95-3-----	Nitrobenzene	410	U	
78-59-1-----	Isophorone	410	U	
88-75-5-----	2-Nitrophenol	410	U	
105-67-9-----	2,4-Dimethylphenol	410	U	
120-83-2-----	2,4-Dichlorophenol	410	U	
120-82-1-----	1,2,4-Trichlorobenzene	410	U	
91-20-3-----	Naphthalene	410	U	
106-47-8-----	4-Chloroaniline	410	U	
87-68-3-----	Hexachlorobutadiene	410	U	
111-91-1-----	bis(-2-Chloroethoxy)methane	410	U	
59-50-7-----	4-Chloro-3-Methylphenol	410	U	
91-57-6-----	2-Methylnaphthalene	410	U	
77-47-4-----	Hexachlorocyclopentadiene	410	U	
88-06-2-----	2,4,6-Trichlorophenol	410	U	
95-95-4-----	2,4,5-Trichlorophenol	1000	U	
91-58-7-----	2-Chloronaphthalene	410	U	
88-74-4-----	2-Nitroaniline	1000	U	
131-11-3-----	Dimethylphthalate	410	U	
208-96-8-----	Acenaphthylene	410	U	
606-20-2-----	2,6-Dinitrotoluene	410	U	
99-09-2-----	3-Nitroaniline	1000	U	
83-32-9-----	Acenaphthene	410	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

I Name: ATAS, INC.

Contract: 68-D5-0018

EBHK2

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.01	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	EE7236.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 19	decanted: (Y/N) N	Date Extracted:	07/29/96
Concentrated Extract Volume:	500 (UL)	Date Analyzed:	08/13/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	PH: 7.9		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1000	U	
100-02-7-----	4-Nitrophenol	1000	U	
132-64-9-----	Dibenzofuran	410	U	
121-14-2-----	2,4-Dinitrotoluene	410	U	
84-66-2-----	Diethylphthalate	410	U	
7005-72-3-----	4-Chlorophenyl-phenylether	410	U	
86-73-7-----	Fluorene	410	U	
100-01-6-----	4-Nitroaniline	1000	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1000	U	
86-30-6-----	N-nitrosodiphenylamine (1)	410	U	
101-55-3-----	4-Bromophenyl-phenylether	410	U	
118-74-1-----	Hexachlorobenzene	410	U	
87-86-5-----	Pentachlorophenol	1000	U	
85-01-8-----	Phenanthrene	410	U	
120-12-7-----	Anthracene	410	U	
86-74-8-----	Carbazole	410	U	
84-74-2-----	Di-n-butylphthalate	410	U	
206-44-0-----	Fluoranthene	410	U	
129-00-0-----	Pyrene	410	U	
85-68-7-----	Butylbenzylphthalate	410	U	
91-94-1-----	3,3'-Dichlorobenzidine	410	U	
56-55-3-----	Benzo(a)anthracene	410	U	
218-01-9-----	Chrysene	410	U	
117-81-7-----	bis(2-Ethylhexyl)phthalate	410	U	
117-84-0-----	Di-n-octylphthalate	410	U	
205-99-2-----	Benzo(b)fluoranthene	410	U	
207-08-9-----	Benzo(k)fluoranthene	410	U	
50-32-8-----	Benzo(a)pyrene	410	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	410	U	
53-70-3-----	Dibenzo(a,h)anthracene	410	U	
191-24-2-----	Benzo(g,h,i)perylene	410	U	

410 37

MJB

act
9-3-96

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK2

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7236.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 19 decanted: (Y/N) N Date Extracted: 07/29/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 08/13/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	5.036	2000	A NJB <i>u</i>
2.	Unknown	5.090	87	J
3.	Unknown	5.810	120	J
4.	Unknown	6.165	940	JB <i>u</i>
5. 5166-53-0	3-Hexen-2-one, 5-methyl-	6.273	220	NJ
6. 142-62-1	Hexanoic acid	6.300	93	NJ
7.	Unknown	6.566	150	J
8.	Unknown	6.599	120	J
9.	Unknown	8.215	120	JB <i>u</i>
10.	Unknown	9.460	93	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK3

Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7083.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 35 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	510		U
111-44-4-----	bis(-2-Chloroethyl)Ether	510		U
95-57-8-----	2-Chlorophenol	510		U
541-73-1-----	1,3-Dichlorobenzene	510		U
106-46-7-----	1,4-Dichlorobenzene	510		U
95-50-1-----	1,2-Dichlorobenzene	510		U
95-48-7-----	2-Methylphenol	510		U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	510		U
106-44-5-----	4-Methylphenol	510		U
621-64-7-----	N-Nitroso-di-n-propylamine	510		U
67-72-1-----	Hexachloroethane	510		U
98-95-3-----	Nitrobenzene	510		U
78-59-1-----	Isophorone	510		U
88-75-5-----	2-Nitrophenol	510		U
105-67-9-----	2,4-Dimethylphenol	510		U
120-83-2-----	2,4-Dichlorophenol	510		U
120-82-1-----	1,2,4-Trichlorobenzene	510		U
91-20-3-----	Naphthalene	29		J
106-47-8-----	4-Chloroaniline	510		U
87-68-3-----	Hexachlorobutadiene	510		U
111-91-1-----	bis(-2-Chloroethoxy)methane	510		U
59-50-7-----	4-Chloro-3-Methylphenol	510		U
91-57-6-----	2-Methylnaphthalene	510		U
77-47-4-----	Hexachlorocyclopentadiene	510		U
88-06-2-----	2,4,6-Trichlorophenol	510		U
95-95-4-----	2,4,5-Trichlorophenol	1300		U
91-58-7-----	2-Chloronaphthalene	510		U
88-74-4-----	2-Nitroaniline	1300		U
131-11-3-----	Dimethylphthalate	510		U
208-96-8-----	Acenaphthylene	510		U
606-20-2-----	2,6-Dinitrotoluene	510		U
99-09-2-----	3-Nitroaniline	1300		U
83-32-9-----	Acenaphthene	510		U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK3

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.04	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID: EE7083.D	
Level: (low/med)	LOW	Date Received: 07/11/96	
% Moisture: 35	decanted: (Y/N) N	Date Extracted: 07/18/96	
Concentrated Extract Volume:	500 (UL)	Date Analyzed: 07/24/96	
Injection Volume:	2.0 (uL)	Dilution Factor: 1.0	
GPC Cleanup: (Y/N) Y	pH: 7.3		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
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51-28-5-----	2,4-Dinitrophenol	1300	U
100-02-7-----	4-Nitrophenol	1300	U
132-64-9-----	Dibenzofuran	510	U
121-14-2-----	2,4-Dinitrotoluene	510	U
84-66-2-----	Diethylphthalate	510	U
7005-72-3-----	4-Chlorophenyl-phenylether	510	U
86-73-7-----	Fluorene	510	U
100-01-6-----	4-Nitroaniline	1300	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1300	U
86-30-6-----	N-nitrosodiphenylamine (1)	510	U
101-55-3-----	4-Bromophenyl-phenylether	510	U
118-74-1-----	Hexachlorobenzene	510	U
87-86-5-----	Pentachlorophenol	1300	U
85-01-8-----	Phenanthrene	180	J
120-12-7-----	Anthracene	37	J
86-74-8-----	Carbazole	510	U
84-74-2-----	Di-n-butylphthalate	38	J
206-44-0-----	Fluoranthene	320	J
129-00-0-----	Pyrene	380	J
85-68-7-----	Butylbenzylphthalate	44	J
91-94-1-----	3,3'-Dichlorobenzidine	510	U
56-55-3-----	Benzo(a)anthracene	210	J
218-01-9-----	Chrysene	320	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	320	μ JB
117-84-0-----	Di-n-octylphthalate	42	J
205-99-2-----	Benzo(b)fluoranthene	310	J
207-08-9-----	Benzo(k)fluoranthene	290	J
50-32-8-----	Benzo(a)pyrene	280	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	200	J
53-70-3-----	Dibenzo(a,h)anthracene	510	U
191-24-2-----	Benzo(g,h,i)perylene	150	J

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9-3-96

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK3

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.04

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7083.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 35 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.253	340	J
2. 123-42-2	2-Pentanone, 4-hydroxy-4-met	5.345	2800	A NJB
3.	Unknown	5.394	680	J
4.	Unknown	6.120	390	J
5.	Unknown	6.469	360	JB
6.	Unknown	6.878	420	J
7.	Unknown	6.911	960	J
8.	Unknown	7.152	360	J
9. 2091-29-4	9-Hexadecenoic acid	14.412	750	NJ
10. 57-10-3	Hexadecanoic acid	14.484	920	NJ
11. 112-80-1	Oleic Acid	15.545	490	NJ
12.	Unknown	26.259	4800	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK4

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.05

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: EE7084.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: 41 decanted: (Y/N) N

Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL)

Date Analyzed: 07/24/96

Injection Volume: 2.0(uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
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108-95-2-----	Phenol	560		U
111-44-4-----	bis(-2-Chloroethyl)Ether	560		U
95-57-8-----	2-Chlorophenol	560		U
541-73-1-----	1,3-Dichlorobenzene	560		U
106-46-7-----	1,4-Dichlorobenzene	35		J
95-50-1-----	1,2-Dichlorobenzene	560		U
95-48-7-----	2-Methylphenol	560		U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	560		U
106-44-5-----	4-Methylphenol	560		U
621-64-7-----	N-Nitroso-di-n-propylamine	560		U
67-72-1-----	Hexachloroethane	560		U
98-95-3-----	Nitrobenzene	560		U
78-59-1-----	Isophorone	560		U
88-75-5-----	2-Nitrophenol	560		U
105-67-9-----	2,4-Dimethylphenol	34		J
120-83-2-----	2,4-Dichlorophenol	560		U
120-82-1-----	1,2,4-Trichlorobenzene	560		U
91-20-3-----	Naphthalene	33		J
106-47-8-----	4-Chloroaniline	560		U
87-68-3-----	Hexachlorobutadiene	560		U
111-91-1-----	bis(-2-Chloroethoxy)methane	560		U
59-50-7-----	4-Chloro-3-Methylphenol	560		U
91-57-6-----	2-Methylnaphthalene	29		J
77-47-4-----	Hexachlorocyclopentadiene	560		U
88-06-2-----	2,4,6-Trichlorophenol	560		U
95-95-4-----	2,4,5-Trichlorophenol	1400		U
91-58-7-----	2-Chloronaphthalene	560		U
88-74-4-----	2-Nitroaniline	1400		U
131-11-3-----	Dimethylphthalate	560		U
208-96-8-----	Acenaphthylene	560		U
606-20-2-----	2,6-Dinitrotoluene	560		U
99-09-2-----	3-Nitroaniline	1400		U
83-32-9-----	Acenaphthene	51		J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK4

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7084.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 41 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/24/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
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51-28-5-----	2,4-Dinitrophenol	1400	U	.
100-02-7-----	4-Nitrophenol	1400	U	.
132-64-9-----	Dibenzofuran	43	J	.
121-14-2-----	2,4-Dinitrotoluene	560	U	.
84-66-2-----	Diethylphthalate	31	J	.
7005-72-3-----	4-Chlorophenyl-phenylether	560	U	.
86-73-7-----	Fluorene	110	J	.
100-01-6-----	4-Nitroaniline	1400	U	.
534-52-1-----	4,6-Dinitro-2-methylphenol	1400	U	.
86-30-6-----	N-nitrosodiphenylamine (1)	560	U	.
101-55-3-----	4-Bromophenyl-phenylether	560	U	.
118-74-1-----	Hexachlorobenzene	560	U	.
87-86-5-----	Pentachlorophenol	1400	U	.
85-01-8-----	Phenanthrene	160	J	.
120-12-7-----	Anthracene	40	J	.
86-74-8-----	Carbazole	100	J	.
84-74-2-----	Di-n-butylphthalate	44	J	.
206-44-0-----	Fluoranthene	260	J	.
129-00-0-----	Pyrene	500	J	.
85-68-7-----	Butylbenzylphthalate	71	J	.
91-94-1-----	3,3'-Dichlorobenzidine	560	U	.
56-55-3-----	Benzo(a)anthracene	180	J	.
218-01-9-----	Chrysene	260	J	.
117-81-7-----	bis(2-Ethylhexyl)phthalate	680	B	.
117-84-0-----	Di-n-octylphthalate	42	J	.
205-99-2-----	Benzo(b)fluoranthene	240	J	.
207-08-9-----	Benzo(k)fluoranthene	140	J	.
50-32-8-----	Benzo(a)pyrene	250	J	.
193-39-5-----	Indeno(1,2,3-cd)pyrene	160	J	.
53-70-3-----	Dibenzo(a,h)anthracene	560	U	.
191-24-2-----	Benzo(g,h,i)perylene	150	J	.

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

000383 OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK4

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: EE7084.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 41 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/24/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

Number TICs found: 13

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	5.329	2700	A NJB
2.	Unknown	5.384	490	J
3.	Unknown	6.458	700	JB
4.	Unknown	6.567	430	J
5.	Unknown	6.851	760	J
6.	Unknown	7.135	470	J
7. 54932-78-4	Phenol, 4-(2,2,3,3-tetrameth	12.440	1500	NJ
8.	Unknown	13.132	840	J
9. 57-10-3	Hexadecanoic acid	14.474	950	NJ
10.	Unknown	15.140	610	J
11. 4602-84-0	2,6,10-Dodecatrien-1-ol, 3,7	19.369	1100	NJ
12. 1599-67-3	1-Docosene	19.791	620	NJ
13. 83-47-6	.gamma.-Sitosterol	26.248	1100	NJ
14.				
15.				
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000384

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK5

Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5982.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 42 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

108-95-2-----	Phenol	570	U
111-44-4-----	bis(-2-Chloroethyl) Ether	570	U
95-57-8-----	2-Chlorophenol	570	U
541-73-1-----	1,3-Dichlorobenzene	570	U
106-46-7-----	1,4-Dichlorobenzene	40	J
95-50-1-----	1,2-Dichlorobenzene	570	U
95-48-7-----	2-Methylphenol	570	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	570	U
106-44-5-----	4-Methylphenol	570	U
621-64-7-----	N-Nitroso-di-n-propylamine	570	U
67-72-1-----	Hexachloroethane	570	U
98-95-3-----	Nitrobenzene	570	U
78-59-1-----	Isophorone	570	U
88-75-5-----	2-Nitrophenol	570	U
105-67-9-----	2,4-Dimethyphenol	570	U
120-83-2-----	2,4-Dichlorophenol	570	U
120-82-1-----	1,2,4-Trichlorobenzene	570	U
91-20-3-----	Naphthalene	570	U
106-47-8-----	4-Chloroaniline	570	U
87-68-3-----	Hexachlorobutadiene	570	U
111-91-1-----	bis(-2-Chloroethoxy)methane	570	U
59-50-7-----	4-Chloro-3-Methylphenol	570	U
91-57-6-----	2-Methylnaphthalene	34	J
77-47-4-----	Hexachlorocyclopentadiene	570	U
88-06-2-----	2,4,6-Trichlorophenol	570	U
95-95-4-----	2,4,5-Trichlorophenol	1400	U
91-58-7-----	2-Chloronaphthalene	570	U
88-74-4-----	2-Nitroaniline	1400	U
131-11-3-----	Dimethylphthalate	570	U
208-96-8-----	Acenaphthylene	34	J
606-20-2-----	2,6-Dinitrotoluene	570	U
99-09-2-----	3-Nitroaniline	1400	U
83-32-9-----	Acenaphthene	48	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK5

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID:	16199.06
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5982.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 42	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500 (uL)	Date Analyzed:	07/25/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.5		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1400	U
100-02-7-----	4-Nitrophenol	1400	U
132-64-9-----	Dibenzofuran	570	U
121-14-2-----	2,4-Dinitrotoluene	570	U
84-66-2-----	Diethylphthalate	570	U
7005-72-3-----	4-Chlorophenyl-phenylether	570	U
86-73-7-----	Fluorene	68	J
100-01-6-----	4-Nitroaniline	1400	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1400	U
86-30-6-----	N-nitrosodiphenylamine (1)	570	U
101-55-3-----	4-Bromophenyl-phenylether	570	U
118-74-1-----	Hexachlorobenzene	570	U
87-86-5-----	Pentachlorophenol	1400	U
85-01-8-----	Phenanthrene	380	J
120-12-7-----	Anthracene	200	J
86-74-8-----	Carbazole	570	U
84-74-2-----	Di-n-butylphthalate	570	U
206-44-0-----	Fluoranthene	1500	.
129-00-0-----	Pyrene	1600	.
85-68-7-----	Butylbenzylphthalate	570	U
91-94-1-----	3,3'-Dichlorobenzidine	570	U
56-55-3-----	Benzo(a)anthracene	740	.
218-01-9-----	Chrysene	1000	.
117-81-7-----	bis(2-Ethylhexyl)phthalate	4200	B
117-84-0-----	Di-n-octylphthalate	570	U
205-99-2-----	Benzo(b)fluoranthene	920	.
207-08-9-----	Benzo(k)fluoranthene	620	.
50-32-8-----	Benzo(a)pyrene	820	.
193-39-5-----	Indeno(1,2,3-cd)pyrene	660	.
53-70-3-----	Dibenzo(a,h)anthracene	570	U
191-24-2-----	Benzo(g,h,i)perylene	440	J

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK5

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.06

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5982.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 42 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-methyl	4.570	2000	A NJB
2.	Unknown	5.940	1100	JB
3.	Unknown	9.091	860	J
4.	Unknown	9.222	600	J
5.	Unknown	9.534	780	J
6.	Unknown	9.638	610	J
7.	Unknown	9.704	840	J
8.	Unknown	10.032	820	J
9.	Unknown	10.215	2300	J
10.	Unknown	10.321	2700	J
11.	Unknown	10.810	590	J
12.	Unknown	11.289	1300	J
13.	Unknown	11.984	610	J
14. 0-00-0	Phenol, 4-(2,2,4-trimethyl-	12.232	2300	NJ
15.	Unknown	12.343	1800	J
16.	Unknown	12.707	1200	J
17.	Unknown	12.752	1300	J
18.	Unknown	12.945	380	J
19.	Unknown	13.471	1200	J
20. 2425-77-6	1-Decanol, 2-hexyl-	13.637	430	NJ
21.	Unknown	17.417	410	J
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29.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK6

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL			Lab Sample ID: 16199.07
Sample wt/vol:	30.0 (g/mL) G		Lab File ID: AA5983.D
Level: (low/med)	LOW		Date Received: 07/11/96
% Moisture: 47	decanted: (Y/N) N		Date Extracted: 07/18/96
Concentrated Extract Volume:	500 (uL)		Date Analyzed: 07/25/96
Injection Volume:	2.0 (uL)		Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y	pH: 6.9		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	620	U	
111-44-4-----	bis (-2-Chloroethyl) Ether	620	U	
95-57-8-----	2-Chlorophenol	620	U	
541-73-1-----	1,3-Dichlorobenzene	620	U	
106-46-7-----	1,4-Dichlorobenzene	620	U	
95-50-1-----	1,2-Dichlorobenzene	620	U	
95-48-7-----	2-Methylphenol	620	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	620	U	
106-44-5-----	4-Methylphenol	620	U	
621-64-7-----	N-Nitroso-di-n-propylamine	620	U	
67-72-1-----	Hexachloroethane	620	U	
98-95-3-----	Nitrobenzene	620	U	
78-59-1-----	Isophorone	620	U	
88-75-5-----	2-Nitrophenol	620	U	
105-67-9-----	2,4-Dimethyphenol	620	U	
120-83-2-----	2,4-Dichlorophenol	620	U	
120-82-1-----	1,2,4-Trichlorobenzene	620	U	
91-20-3-----	Naphthalene	620	U	
106-47-8-----	4-Chloroaniline	620	U	
87-68-3-----	Hexachlorobutadiene	620	U	
111-91-1-----	bis (-2-Chloroethoxy)methane	620	U	
59-50-7-----	4-Chloro-3-Methylphenol	620	U	
91-57-6-----	2-Methylnaphthalene	620	U	
77-47-4-----	Hexachlorocyclopentadiene	620	U	
88-06-2-----	2,4,6-Trichlorophenol	620	U	
95-95-4-----	2,4,5-Trichlorophenol	1600	U	
91-58-7-----	2-Chloronaphthalene	620	U	
88-74-4-----	2-Nitroaniline	1600	U	
131-11-3-----	Dimethylphthalate	620	U	
208-96-8-----	Acenaphthylene	620	U	
606-20-2-----	2,6-Dinitrotoluene	620	U	
99-09-2-----	3-Nitroaniline	1600	U	
83-32-9-----	Acenaphthene	620	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Name: ATAS, INC.	Contract: 68-D5-0018	EBHK6	
Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.07	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5983.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 47	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed:	07/25/96
Injection Volume:	2.0(uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	PH: 6.9		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1600	U	
100-02-7-----	4-Nitrophenol	1600	U	
132-64-9-----	Dibenzofuran	620	U	
121-14-2-----	2,4-Dinitrotoluene	620	U	
84-66-2-----	Diethylphthalate	620	U	
7005-72-3-----	4-Chlorophenyl-phenylether	620	U	
86-73-7-----	Fluorene	620	U	
100-01-6-----	4-Nitroaniline	1600	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1600	U	
86-30-6-----	N-nitrosodiphenylamine (1)	620	U	
101-55-3-----	4-Bromophenyl-phenylether	620	U	
118-74-1-----	Hexachlorobenzene	620	U	
87-86-5-----	Pentachlorophenol	1600	U	
85-01-8-----	Phenanthrene	100	J	
120-12-7-----	Anthracene	620	U	
86-74-8-----	Carbazole	620	U	
84-74-2-----	Di-n-butylphthalate	57	J	
206-44-0-----	Fluoranthene	220	J	
129-00-0-----	Pyrene	240	J	
85-68-7-----	Butylbenzylphthalate	620	U	
91-94-1-----	3,3'-Dichlorobenzidine	620	U	
56-55-3-----	Benzo(a)anthracene	120	J	
218-01-9-----	Chrysene	180	J	
117-81-7-----	bis(2-Ethylhexyl)phthalate	620	U	
117-84-0-----	Di-n-octylphthalate	93	J	
205-99-2-----	Benzo(b)fluoranthene	200	J	
207-08-9-----	Benzo(k)fluoranthene	120	J	
50-32-8-----	Benzo(a)pyrene	620	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	620	U	
53-70-3-----	Dibenzo(a,h)anthracene	620	U	
191-24-2-----	Benzo(g,h,i)perylene	620	U	

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK6

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5983.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 47 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9

Number TICs found: 22

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.570	2700	A NJB
2.	Unknown	4.684	660	J
3.	Unknown	5.940	1400	JB
4.	Unknown	6.440	1000	J
5.	Unknown	7.160	710	J
6.	Unknown	13.468	440	J
7.	Unknown	14.359	470	J
8.	Unknown	14.414	1000	J
9. 57-10-3	Hexadecanoic acid	14.453	1100	NJ
10.	Unknown	15.028	1200	J
11.	Unknown	15.066	4000	J
12.	Unknown	15.154	4000	J
13.	Unknown	15.264	590	J
14.	Unknown	16.379	1400	J
15.	Unknown	17.397	1500	J
16.	Unknown	18.351	2100	J
17. 36237-66-8	6,10,14-Hexadecatrien-1-ol,	19.075	1200	NJ
18.	Unknown	19.307	2200	J
19.	Unknown	19.478	1200	J
20.	Unknown	20.488	900	J
21.	Unknown	20.725	880	J
22.	Unknown	23.904	1500	J
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

I Name: ATAS, INC.

Contract: 68-D5-0018

EBHK7

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.08	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5984.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 46	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed:	07/25/96
Injection Volume:	2.0(uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	PH: 7.0		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	610	U	
111-44-4-----	bis(-2-Chloroethyl)Ether	610	U	
95-57-8-----	2-Chlorophenol	610	U	
541-73-1-----	1,3-Dichlorobenzene	610	U	
106-46-7-----	1,4-Dichlorobenzene	610	U	
95-50-1-----	1,2-Dichlorobenzene	610	U	
95-48-7-----	2-Methylphenol	610	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	610	U	
106-44-5-----	4-Methylphenol	610	U	
621-64-7-----	N-Nitroso-di-n-propylamine	610	U	
67-72-1-----	Hexachloroethane	610	U	
98-95-3-----	Nitrobenzene	610	U	
78-59-1-----	Isophorone	610	U	
88-75-5-----	2-Nitrophenol	610	U	
105-67-9-----	2,4-Dimethyphenol	610	U	
120-83-2-----	2,4-Dichlorophenol	610	U	
120-82-1-----	1,2,4-Trichlorobenzene	610	U	
91-20-3-----	Naphthalene	610	U	
106-47-8-----	4-Chloroaniline	610	U	
87-68-3-----	Hexachlorobutadiene	610	U	
111-91-1-----	bis(-2-Chloroethoxy)methane	610	U	
59-50-7-----	4-Chloro-3-Methylphenol	610	U	
91-57-6-----	2-Methylnaphthalene	610	U	
77-47-4-----	Hexachlorocyclopentadiene	610	U	
88-06-2-----	2,4,6-Trichlorophenol	610	U	
95-95-4-----	2,4,5-Trichlorophenol	1500	U	
91-58-7-----	2-Chloronaphthalene	610	U	
88-74-4-----	2-Nitroaniline	1500	U	
131-11-3-----	Dimethylphthalate	610	U	
208-96-8-----	Acenaphthylene	610	U	
606-20-2-----	2,6-Dinitrotoluene	610	U	
99-09-2-----	3-Nitroaniline	1500	U	
83-32-9-----	Acenaphthene	610	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK7

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: .16199.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5984.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 46 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1500	U	
100-02-7-----	4-Nitrophenol	1500	U	
132-64-9-----	Dibenzofuran	610	U	
121-14-2-----	2,4-Dinitrotoluene	610	U	
84-66-2-----	Diethylphthalate	610	U	
7005-72-3-----	4-Chlorophenyl-phenylether	610	U	
86-73-7-----	Fluorene	610	U	
100-01-6-----	4-Nitroaniline	1500	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1500	U	
86-30-6-----	N-nitrosodiphenylamine (1)	610	U	
101-55-3-----	4-Bromophenyl-phenylether	610	U	
118-74-1-----	Hexachlorobenzene	610	U	
87-86-5-----	Pentachlorophenol	1500	U	
85-01-8-----	Phenanthrene	130	J	.
120-12-7-----	Anthracene	610	U	
86-74-8-----	Carbazole	610	U	
84-74-2-----	Di-n-butylphthalate	65	J	.
206-44-0-----	Fluoranthene	250	J	.
129-00-0-----	Pyrene	280	J	.
85-68-7-----	Butylbenzylphthalate	80	J	.
91-94-1-----	3,3'-Dichlorobenzidine	610	U	
56-55-3-----	Benzo(a)anthracene	140	J	.
218-01-9-----	Chrysene	180	J	.
117-81-7-----	bis(2-Ethylhexyl)phthalate	610	U	
117-84-0-----	Di-n-octylphthalate	68	J	.
205-99-2-----	Benzo(b)fluoranthene	180	J	.
207-08-9-----	Benzo(k)fluoranthene	130	J	.
50-32-8-----	Benzo(a)pyrene	160	J	.
193-39-5-----	Indeno(1,2,3-cd)pyrene	610	U	
53-70-3-----	Dibenzo(a,h)anthracene	610	U	
191-24-2-----	Benzo(g,h,i)perylene	610	U	

(1) - Cannot be separated from Diphenylamine

**SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS**

EBHK7

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.08

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5984.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 46 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.560	2500	A NJB
2.	Unknown	4.683	800	J
3.	Unknown	5.942	1700	JB
4.	Unknown	6.447	840	J
5.	Unknown	7.154	690	J
6.	Unknown	12.707	5400	J
7.	Unknown	13.469	500	J
8.	Unknown	13.569	510	J
9.	Unknown	13.630	380	J
10. 4727-18-8	Cyclopentadecanone, 2-hydrox	14.365	440	NJ
11.	Unknown	14.420	1300	J
12. 57-10-3	Hexadecanoic acid	14.458	1300	NJ
13.	Unknown	14.842	400	J
14.	Unknown	15.034	1400	J
15.	Unknown	15.073	4400	J
16.	Unknown	15.161	4200	J
17.	Unknown	16.090	380	J
18.	Unknown	18.351	1600	J
19. 106-28-5	2,6,10-Dodecatrien-1-ol, 3,7	19.080	780	NJ
20.	Unknown	19.312	1300	J
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23.				
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28.				
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30.				

000539

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK8

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.09	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5985.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 34	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500 (uL)	Date Analyzed:	07/25/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 8.0		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2-----	Phenol	500	U
111-44-4-----	bis(-2-Chloroethyl) Ether	500	U
95-57-8-----	2-Chlorophenol	500	U
541-73-1-----	1,3-Dichlorobenzene	500	U
106-46-7-----	1,4-Dichlorobenzene	500	U
95-50-1-----	1,2-Dichlorobenzene	500	U
95-48-7-----	2-Methylphenol	500	U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	500	U
106-44-5-----	4-Methylphenol	500	U
621-64-7-----	N-Nitroso-di-n-propylamine	500	U
67-72-1-----	Hexachloroethane	500	U
98-95-3-----	Nitrobenzene	500	U
78-59-1-----	Isophorone	500	U
88-75-5-----	2-Nitrophenol	500	U
105-67-9-----	2,4-Dimethyphenol	500	U
120-83-2-----	2,4-Dichlorophenol	500	U
120-82-1-----	1,2,4-Trichlorobenzene	500	U
91-20-3-----	Naphthalene	500	U
106-47-8-----	4-Chloroaniline	500	U
87-68-3-----	Hexachlorobutadiene	500	U
111-91-1-----	bis(-2-Chloroethoxy)methane	500	U
59-50-7-----	4-Chloro-3-Methylphenol	500	U
91-57-6-----	2-Methylnaphthalene	500	U
77-47-4-----	Hexachlorocyclopentadiene	500	U
88-06-2-----	2,4,6-Trichlorophenol	500	U
95-95-4-----	2,4,5-Trichlorophenol	1200	U
91-58-7-----	2-Chloronaphthalene	500	U
88-74-4-----	2-Nitroaniline	1200	U
131-11-3-----	Dimethylphthalate	500	U
208-96-8-----	Acenaphthylene	500	U
606-20-2-----	2,6-Dinitrotoluene	500	U
99-09-2-----	3-Nitroaniline	1200	U
83-32-9-----	Acenaphthene	500	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK8

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5985.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 34 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
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51-28-5-----	2,4-Dinitrophenol	1200	U
100-02-7-----	4-Nitrophenol	1200	U
132-64-9-----	Dibenzofuran	500	U
121-14-2-----	2,4-Dinitrotoluene	500	U
84-66-2-----	Diethylphthalate	500	U
7005-72-3-----	4-Chlorophenyl-phenylether	500	U
86-73-7-----	Fluorene	500	U
100-01-6-----	4-Nitroaniline	1200	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1200	U
86-30-6-----	N-nitrosodiphenylamine (1)	500	U
101-55-3-----	4-Bromophenyl-phenylether	500	U
118-74-1-----	Hexachlorobenzene	500	U
87-86-5-----	Pentachlorophenol	1200	U
85-01-8-----	Phenanthrene	98	J
120-12-7-----	Anthracene	48	J
86-74-8-----	Carbazole	500	U
84-74-2-----	Di-n-butylphthalate	500	U
206-44-0-----	Fluoranthene	350	J
129-00-0-----	Pyrene	460	J
85-68-7-----	Butylbenzylphthalate	94	J
91-94-1-----	3,3'-Dichlorobenzidine	500	U
56-55-3-----	Benzo(a)anthracene	290	J
218-01-9-----	Chrysene	450	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	500	U
117-84-0-----	Di-n-octylphthalate	40	J
205-99-2-----	Benzo(b)fluoranthene	480	J
207-08-9-----	Benzo(k)fluoranthene	490	J
50-32-8-----	Benzo(a)pyrene	420	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	350	J
53-70-3-----	Dibenzo(a,h)anthracene	500	U
191-24-2-----	Benzo(g,h,i)perylene	290	J

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK8

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5985.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 34 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 16

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.570	2900	A NJB
2.	Unknown	4.682	530	J
3.	Unknown	4.791	320	JB
4.	Unknown	5.490	380	J
5.	Unknown	5.940	850	JB
6.	Unknown	6.370	490	J
7.	Unknown	6.450	940	J
8.	Unknown	7.150	990	J
9. 4727-18-8	Cyclopentadecanone, 2-hydrox	14.359	500	NJ
10. 57-10-3	Hexadecanoic acid	14.452	910	NJ
11.	Unknown	18.442	520	J
12.	Unknown	19.069	1200	J
13.	Unknown	19.454	1100	J
14.	Unknown	20.206	820	J
15.	Unknown	20.484	1500	J
16.	Unknown	22.952	1700	J
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000584

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK9

b Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5986.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 37 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q
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108-95-2-----	Phenol	520		U
111-44-4-----	bis(-2-Chloroethyl)Ether	520		U
95-57-8-----	2-Chlorophenol	520		U
541-73-1-----	1,3-Dichlorobenzene	520		U
106-46-7-----	1,4-Dichlorobenzene	520		U
95-50-1-----	1,2-Dichlorobenzene	520		U
95-48-7-----	2-Methylphenol	520		U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	520		U
106-44-5-----	4-Methylphenol	520		U
621-64-7-----	N-Nitroso-di-n-propylamine	520		U
67-72-1-----	Hexachloroethane	520		U
98-95-3-----	Nitrobenzene	520		U
78-59-1-----	Isophorone	520		U
88-75-5-----	2-Nitrophenol	520		U
105-67-9-----	2,4-Dimethyphenol	520		U
120-83-2-----	2,4-Dichlorophenol	520		U
120-82-1-----	1,2,4-Trichlorobenzene	520		U
91-20-3-----	Naphthalene	520		U
106-47-8-----	4-Chloroaniline	520		U
87-68-3-----	Hexachlorobutadiene	520		U
111-91-1-----	bis(-2-Chloroethoxy)methane	520		U
59-50-7-----	4-Chloro-3-Methylphenol	520		U
91-57-6-----	2-Methylnaphthalene	520		U
77-47-4-----	Hexachlorocyclopentadiene	520		U
88-06-2-----	2,4,6-Trichlorophenol	520		U
95-95-4-----	2,4,5-Trichlorophenol	1300		U
91-58-7-----	2-Chloronaphthalene	520		U
88-74-4-----	2-Nitroaniline	1300		U
131-11-3-----	Dimethylphthalate	520		U
208-96-8-----	Acenaphthylene	520		U
606-20-2-----	2,6-Dinitrotoluene	520		U
99-09-2-----	3-Nitroaniline	1300		U
83-32-9-----	Acenaphthene	520		U

1C
SEMOVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHK9

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.10

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: AA5986.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: 37 decanted: (Y/N) N

Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
51-28-5-----	2,4-Dinitrophenol	1300	U	
100-02-7-----	4-Nitrophenol	1300	U	
132-64-9-----	Dibenzofuran	520	U	
121-14-2-----	2,4-Dinitrotoluene	520	U	
84-66-2-----	Diethylphthalate	520	U	
7005-72-3-----	4-Chlorophenyl-phenylether	520	U	
86-73-7-----	Fluorene	520	U	
100-01-6-----	4-Nitroaniline	1300	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1300	U	
86-30-6-----	N-nitrosodiphenylamine (1)	520	U	
101-55-3-----	4-Bromophenyl-phenylether	520	U	
118-74-1-----	Hexachlorobenzene	520	U	
87-86-5-----	Pentachlorophenol	1300	U	
85-01-8-----	Phenanthrene	100	J	.
120-12-7-----	Anthracene	70	J	.
86-74-8-----	Carbazole	520	U	
84-74-2-----	Di-n-butylphthalate	520	U	
206-44-0-----	Fluoranthene	570	—	.
129-00-0-----	Pyrene	550	—	.
85-68-7-----	Butylbenzylphthalate	520	U	
91-94-1-----	3,3'-Dichlorobenzidine	520	U	
56-55-3-----	Benzo(a)anthracene	400	J	.
218-01-9-----	Chrysene	500	J	.
117-81-7-----	bis(2-Ethylhexyl)phthalate	520	U	
117-84-0-----	Di-n-octylphthalate	520	U	
205-99-2-----	Benzo(b)fluoranthene	580	—	.
207-08-9-----	Benzo(k)fluoranthene	430	J	.
50-32-8-----	Benzo(a)pyrene	480	J	.
193-39-5-----	Indeno(1,2,3-cd)pyrene	290	J	.
53-70-3-----	Dibenzo(a,h)anthracene	520	U	
191-24-2-----	Benzo(g,h,i)perylene	230	J	.

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHK9

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.10

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: AA5986.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: 37 decanted: (Y/N) N

Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.570	3500	A NJB
2.	Unknown	4.682	270	J
3.	Unknown	5.490	340	J
4.	Unknown	5.740	340	J
5.	Unknown	5.940	1100	JB
6.	Unknown	6.446	1100	J
7.	Unknown	7.153	1000	J
8.	Unknown	13.553	300	J
9.	Unknown	14.033	230	J
10.	Unknown	14.365	1100	J
11.	Unknown	14.409	410	J
12. 57-10-3	Hexadecanoic acid	14.452	950	NJ
13. 150-86-7	Phytol	15.456	250	NJ
14.	Unknown	19.064	1900	J
15.	Unknown	20.205	1000	J
16.				
17.				
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000629

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL0

Lab Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5987.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 28 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
108-95-2-----	Phenol	460	U	
111-44-4-----	bis(-2-Chloroethyl) Ether	460	U	
95-57-8-----	2-Chlorophenol	460	U	
541-73-1-----	1,3-Dichlorobenzene	460	U	
106-46-7-----	1,4-Dichlorobenzene	460	U	
95-50-1-----	1,2-Dichlorobenzene	460	U	
95-48-7-----	2-Methylphenol	460	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	460	U	
106-44-5-----	4-Methylphenol	460	U	
621-64-7-----	N-Nitroso-di-n-propylamine	460	U	
67-72-1-----	Hexachloroethane	460	U	
98-95-3-----	Nitrobenzene	460	U	
78-59-1-----	Isophorone	460	U	
88-75-5-----	2-Nitrophenol	460	U	
105-67-9-----	2,4-Dimethyphenol	460	U	
120-83-2-----	2,4-Dichlorophenol	460	U	
120-82-1-----	1,2,4-Trichlorobenzene	460	U	
91-20-3-----	Naphthalene	38	J	.
106-47-8-----	4-Chloroaniline	460	U	
87-68-3-----	Hexachlorobutadiene	460	U	
111-91-1-----	bis(-2-Chloroethoxy)methane	460	U	
59-50-7-----	4-Chloro-3-Methylphenol	460	U	
91-57-6-----	2-Methylnaphthalene	28	J	.
77-47-4-----	Hexachlorocyclopentadiene	460	U	
88-06-2-----	2,4,6-Trichlorophenol	460	U	
95-95-4-----	2,4,5-Trichlorophenol	1200	U	
91-58-7-----	2-Chloronaphthalene	460	U	
88-74-4-----	2-Nitroaniline	1200	U	
131-11-3-----	Dimethylphthalate	460	U	
208-96-8-----	Acenaphthylene	45	J	.
606-20-2-----	2,6-Dinitrotoluene	460	U	
99-09-2-----	3-Nitroaniline	1200	U	
83-32-9-----	Acenaphthene	460	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL0

Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5987.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 28 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1200	U	
100-02-7-----	4-Nitrophenol	1200	U	
132-64-9-----	Dibenzofuran	460	U	
121-14-2-----	2,4-Dinitrotoluene	460	U	
84-66-2-----	Diethylphthalate	460	U	
7005-72-3-----	4-Chlorophenyl-phenylether	460	U	
86-73-7-----	Fluorene	460	U	
100-01-6-----	4-Nitroaniline	1200	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6-----	N-nitrosodiphenylamine (1)	460	U	
101-55-3-----	4-Bromophenyl-phenylether	460	U	
118-74-1-----	Hexachlorobenzene	460	U	
87-86-5-----	Pentachlorophenol	1200	U	
85-01-8-----	Phenanthrene	190	J	.
120-12-7-----	Anthracene	84	J	.
86-74-8-----	Carbazole	460	U	
84-74-2-----	Di-n-butylphthalate	64	J	.
206-44-0-----	Fluoranthene	360	J	.
129-00-0-----	Pyrene	500		.
85-68-7-----	Butylbenzylphthalate	110	J	.
91-94-1-----	3,3'-Dichlorobenzidine	460	U	
56-55-3-----	Benzo(a)anthracene	410	J	.
218-01-9-----	Chrysene	490		.
117-81-7-----	bis(2-Ethylhexyl)phthalate	460	U	
117-84-0-----	Di-n-octylphthalate	460	U	
205-99-2-----	Benzo(b)fluoranthene	500		.
207-08-9-----	Benzo(k)fluoranthene	340	J	.
50-32-8-----	Benzo(a)pyrene	480		.
193-39-5-----	Indeno(1,2,3-cd)pyrene	500		.
53-70-3-----	Dibenzo(a,h)anthracene	460	U	
191-24-2-----	Benzo(g,h,i)perylene	420	J	.

(1) - Cannot be separated from Diphenylamine

1F
SEMICVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHLO

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.11

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: AA5987.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: 28 decanted: (Y/N) N

Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL)

Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 8.0

Number TICs found: 17

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.560	2200	A NJB
2.	Unknown	4.678	270	J
3.	Unknown	4.749	260	JB
4.	Unknown	4.787	250	JB
5.	Unknown	5.740	300	J
6.	Unknown	5.938	860	JB
7.	Unknown	6.443	660	J
8.	Unknown	7.149	720	J
9.	Unknown	13.558	250	J
10.	Unknown	14.359	200	J
11. 57-10-3	Hexadecanoic acid	14.447	240	NJ
12.	Unknown	15.459	220	J
13. 638-66-4	Octadecanal	18.107	260	NJ
14.	Unknown	18.428	500	J
15.	Unknown	19.066	1300	J
16.	Unknown	19.420	1900	J
17.	Unknown	20.488	720	J
18.				
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000673

FORM I SV-TIC

OLM03.0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL7

Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5988.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 35 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/25/96

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	510		U
111-44-4-----	bis(-2-Chloroethyl)Ether	510		U
95-57-8-----	2-Chlorophenol	510		U
541-73-1-----	1,3-Dichlorobenzene	510		U
106-46-7-----	1,4-Dichlorobenzene	510		U
95-50-1-----	1,2-Dichlorobenzene	510		U
95-48-7-----	2-Methylphenol	510		U
108-60-1-----	2,2'-oxybis(1-Chloropropane)	510		U
106-44-5-----	4-Methylphenol	510		U
621-64-7-----	N-Nitroso-di-n-propylamine	510		U
67-72-1-----	Hexachloroethane	510		U
98-95-3-----	Nitrobenzene	510		U
78-59-1-----	Isophorone	510		U
88-75-5-----	2-Nitrophenol	510		U
105-67-9-----	2,4-Dimethyphenol	510		U
120-83-2-----	2,4-Dichlorophenol	510		U
120-82-1-----	1,2,4-Trichlorobenzene	510		U
91-20-3-----	Naphthalene	510		U
106-47-8-----	4-Chloroaniline	510		U
87-68-3-----	Hexachlorobutadiene	510		U
111-91-1-----	bis(-2-Chloroethoxy)methane	510		U
59-50-7-----	4-Chloro-3-Methylphenol	510		U
91-57-6-----	2-Methylnaphthalene	510		U
77-47-4-----	Hexachlorocyclopentadiene	510		U
88-06-2-----	2,4,6-Trichlorophenol	510		U
95-95-4-----	2,4,5-Trichlorophenol	1300		U
91-58-7-----	2-Chloronaphthalene	510		U
88-74-4-----	2-Nitroaniline	1300		U
131-11-3-----	Dimethylphthalate	510		U
208-96-8-----	Acenaphthylene	510		U
606-20-2-----	2,6-Dinitrotoluene	510		U
99-09-2-----	3-Nitroaniline	1300		U
83-32-9-----	Acenaphthene	510		U

^{1C}
SEMICVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL7

Lab Name: ATAS, INC.	Contract: 68-D5-0018	
Lab Code: ATAS	Case No.: 24831	SAS No.: SDG No.: EBHK2
Matrix: (soil/water) SOIL	Lab Sample ID: 16199.12	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID: AA5988.D
Level: (low/med)	LOW	Date Received: 07/11/96
% Moisture: 35	decanted: (Y/N) N	Date Extracted: 07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed: 07/25/96
Injection Volume:	2.0(uL)	Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y	pH: 7.7	

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1300	U
100-02-7-----	4-Nitrophenol	1300	U
132-64-9-----	Dibenzofuran	510	U
121-14-2-----	2,4-Dinitrotoluene	510	U
84-66-2-----	Diethylphthalate	510	U
7005-72-3-----	4-Chlorophenyl-phenylether	510	U
86-73-7-----	Fluorene	510	U
100-01-6-----	4-Nitroaniline	1300	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1300	U
86-30-6-----	N-nitrosodiphenylamine (1)	510	U
101-55-3-----	4-Bromophenyl-phenylether	510	U
118-74-1-----	Hexachlorobenzene	510	U
87-86-5-----	Pentachlorophenol	1300	U
85-01-8-----	Phenanthrene	55	J
120-12-7-----	Anthracene	510	U
86-74-8-----	Carbazole	510	U
84-74-2-----	Di-n-butylphthalate	60	J
206-44-0-----	Fluoranthene	100	J
129-00-0-----	Pyrene	100	J
85-68-7-----	Butylbenzylphthalate	98	J
91-94-1-----	3,3'-Dichlorobenzidine	510	U
56-55-3-----	Benzo(a)anthracene	66	J
218-01-9-----	Chrysene	140	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	580	B
117-84-0-----	Di-n-octylphthalate	510	U
205-99-2-----	Benzo(b)fluoranthene	250	J
207-08-9-----	Benzo(k)fluoranthene	210	J
50-32-8-----	Benzo(a)pyrene	92	J
193-39-5-----	Indeno(1,2,3-cd)pyrene	510	U
53-70-3-----	Dibenzo(a,h)anthracene	510	U
191-24-2-----	Benzo(g,h,i)perylene	510	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2

000719

OLM03.0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHL7

b Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5988.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 35 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.7

CONCENTRATION UNITS:

Number TICs found: 14 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	4.570	2100	A NJB
2.	Unknown	4.753	370	JB
3.	Unknown	4.791	220	JB
4. 615-29-2	3-Hexanol, 4-methyl-	5.763	480	NJ
5.	Unknown	5.937	540	JB
6.	Unknown	6.366	460	J
7.	Unknown	6.450	260	J
8.	Unknown	7.160	240	J
9.	Unknown	12.745	360	J
10.	Unknown	14.362	520	J
11. 57-10-3	Hexadecanoic acid	14.450	310	NJ
12.	Unknown	18.353	580	J
13. 36237-66-8	6,10,14-Hexadecatrien-1-ol,	19.076	1100	NJ
14.	Unknown	23.595	1800	J
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000720

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHL8

Lab Code: ATAS	Case No.: 24831	SAS No.:	SDG No.: EBHK2
Matrix: (soil/water) SOIL		Lab Sample ID: .16199.13	
Sample wt/vol:	30.0 (g/mL) G	Lab File ID:	AA5989.D
Level: (low/med)	LOW	Date Received:	07/11/96
% Moisture: 30	decanted: (Y/N) N	Date Extracted:	07/18/96
Concentrated Extract Volume:	500 (UL)	Date Analyzed:	07/25/96
Injection Volume:	2.0 (uL)	Dilution Factor:	1.0
GPC Cleanup: (Y/N) Y	pH: 7.3		

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
108-95-2-----	Phenol	470	U	
111-44-4-----	bis (-2-Chloroethyl) Ether	470	U	
95-57-8-----	2-Chlorophenol	470	U	
541-73-1-----	1,3-Dichlorobenzene	470	U	
106-46-7-----	1,4-Dichlorobenzene	470	U	
95-50-1-----	1,2-Dichlorobenzene	470	U	
95-48-7-----	2-Methylphenol	470	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	470	U	
106-44-5-----	4-Methylphenol	470	U	
621-64-7-----	N-Nitroso-di-n-propylamine	470	U	
67-72-1-----	Hexachloroethane	470	U	
98-95-3-----	Nitrobenzene	470	U	
78-59-1-----	Isophorone	470	U	
88-75-5-----	2-Nitrophenol	470	U	
105-67-9-----	2,4-Dimethyphenol	470	U	
120-83-2-----	2,4-Dichlorophenol	470	U	
120-82-1-----	1,2,4-Trichlorobenzene	470	U	
91-20-3-----	Naphthalene	470	U	
106-47-8-----	4-Chloroaniline	470	U	
87-68-3-----	Hexachlorobutadiene	470	U	
111-91-1-----	bis (-2-Chloroethoxy)methane	470	U	
59-50-7-----	4-Chloro-3-Methylphenol	470	U	
91-57-6-----	2-Methylnaphthalene	470	U	
77-47-4-----	Hexachlorocyclopentadiene	470	U	
88-06-2-----	2,4,6-Trichlorophenol	470	U	
95-95-4-----	2,4,5-Trichlorophenol	1200	U	
91-58-7-----	2-Chloronaphthalene	470	U	
88-74-4-----	2-Nitroaniline	1200	U	
131-11-3-----	Dimethylphthalate	470	U	
208-96-8-----	Acenaphthylene	470	U	
606-20-2-----	2,6-Dinitrotoluene	470	U	
99-09-2-----	3-Nitroaniline	1200	U	
83-32-9-----	Acenaphthene	470	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL8

Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5989.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500(UL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

51-28-5-----	2,4-Dinitrophenol	1200	U
100-02-7-----	4-Nitrophenol	1200	U
132-64-9-----	Dibenzofuran	470	U
121-14-2-----	2,4-Dinitrotoluene	470	U
84-66-2-----	Diethylphthalate	25	J
7005-72-3-----	4-Chlorophenyl-phenylether	470	U
86-73-7-----	Fluorene	470	U
100-01-6-----	4-Nitroaniline	1200	U
534-52-1-----	4,6-Dinitro-2-methylphenol	1200	U
86-30-6-----	N-nitrosodiphenylamine (1)	470	U
101-55-3-----	4-Bromophenyl-phenylether	470	U
118-74-1-----	Hexachlorobenzene	470	U
87-86-5-----	Pentachlorophenol	1200	U
85-01-8-----	Phenanthrene	43	J
120-12-7-----	Anthracene	470	U
86-74-8-----	Carbazole	470	U
84-74-2-----	Di-n-butylphthalate	45	J
206-44-0-----	Fluoranthene	74	J
129-00-0-----	Pyrene	78	J
85-68-7-----	Butylbenzylphthalate	76	J
91-94-1-----	3,3'-Dichlorobenzidine	470	U
56-55-3-----	Benzo(a)anthracene	32	J
218-01-9-----	Chrysene	49	J
117-81-7-----	bis(2-Ethylhexyl)phthalate	470	120
117-84-0-----	Di-n-octylphthalate	27	J
205-99-2-----	Benzo(b)fluoranthene	41	J
207-08-9-----	Benzo(k)fluoranthene	34	J
50-32-8-----	Benzo(a)pyrene	470	U
193-39-5-----	Indeno(1,2,3-cd)pyrene	470	U
53-70-3-----	Dibenzo(a,h)anthracene	470	U
191-24-2-----	Benzo(g,h,i)perylene	470	U

(1) - Cannot be separated from Diphenylamine

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHL8

Lab Name: ATAS, INC.

Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5989.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Number TICs found: 19

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.580	1700	A NJB
2.	Unknown	5.500	230	J
3.	Unknown	5.740	240	J
4.	Unknown	5.942	400	JB
5.	Unknown	6.067	300	J
6.	Unknown	6.458	470	J
7. 544-63-8	Tetradecanoic acid	13.137	260	NJ
8.	Unknown	14.370	570	J
9. 57-10-3	Hexadecanoic acid	14.464	740	NJ
10.	Unknown	15.156	1000	J
11.	Unknown	15.266	220	J
12.	Unknown	15.810	230	J
13.	Unknown	17.406	320	J
14.	Unknown	19.072	820	J
15.	Unknown	19.315	2100	J
16.	Unknown	19.414	1300	J
17.	Unknown	20.490	730	J
18.	Unknown	21.647	3100	J
19.	Unknown	23.579	1900	J
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000750

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EBHL8RE

> Name: ATAS, INC.	Contract: 68-D5-0018	
Lab Code: ATAS	Case No.: 24831	SAS No.:
Matrix: (soil/water) SOIL		Lab Sample ID: 16199.13
Sample wt/vol:	30.0 (g/mL) G	Lab File ID: AA5991.D
Level: (low/med)	LOW	Date Received: 07/11/96
% Moisture: 30	decanted: (Y/N) N	Date Extracted: 07/18/96
Concentrated Extract Volume:	500(UL)	Date Analyzed: 07/25/96
Injection Volume:	2.0 (uL)	Dilution Factor: 1.0
GPC Cleanup: (Y/N) Y	pH: 7.3	

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

Q

CAS NO.	COMPOUND			
108-95-2-----	Phenol	470	U	
111-44-4-----	bis(-2-Chloroethyl)Ether	470	U	
95-57-8-----	2-Chlorophenol	470	U	
541-73-1-----	1,3-Dichlorobenzene	470	U	
106-46-7-----	1,4-Dichlorobenzene	470	U	
95-50-1-----	1,2-Dichlorobenzene	470	U	
95-48-7-----	2-Methylphenol	470	U	
108-60-1-----	2,2'-oxybis(1-Chloropropane)	470	U	
106-44-5-----	4-Methylphenol	470	U	
621-64-7-----	N-Nitroso-di-n-propylamine	470	U	
67-72-1-----	Hexachloroethane	470	U	
98-95-3-----	Nitrobenzene	470	U	
78-59-1-----	Isophorone	470	U	
88-75-5-----	2-Nitrophenol	470	U	
105-67-9-----	2,4-Dimethyphenol	470	U	
120-83-2-----	2,4-Dichlorophenol	470	U	
120-82-1-----	1,2,4-Trichlorobenzene	470	U	
91-20-3-----	Naphthalene	470	U	
106-47-8-----	4-Chloroaniline	470	U	
87-68-3-----	Hexachlorobutadiene	470	U	
111-91-1-----	bis(-2-Chloroethoxy)methane	470	U	
59-50-7-----	4-Chloro-3-Methylphenol	470	U	
91-57-6-----	2-Methylnaphthalene	470	U	
77-47-4-----	Hexachlorocyclopentadiene	470	U	
88-06-2-----	2,4,6-Trichlorophenol	470	U	
95-95-4-----	2,4,5-Trichlorophenol	1200	U	
91-58-7-----	2-Chloronaphthalene	470	U	
88-74-4-----	2-Nitroaniline	1200	U	
131-11-3-----	Dimethylphthalate	470	U	
208-96-8-----	Acenaphthylene	470	U	
606-20-2-----	2,6-Dinitrotoluene	470	U	
99-09-2-----	3-Nitroaniline	1200	U	
83-32-9-----	Acenaphthene	470	U	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHL8RE

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.13

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: AA5991.D

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: 30 decanted: (Y/N) N

Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (UL)

Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
51-28-5-----	2,4-Dinitrophenol	1200	U	
100-02-7-----	4-Nitrophenol	1200	U	
132-64-9-----	Dibenzofuran	470	U	
121-14-2-----	2,4-Dinitrotoluene	470	U	
84-66-2-----	Diethylphthalate	25	J	
7005-72-3-----	4-Chlorophenyl-phenylether	470	U	
86-73-7-----	Fluorene	470	U	
100-01-6-----	4-Nitroaniline	1200	U	
534-52-1-----	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6-----	N-nitrosodiphenylamine (1)	470	U	
101-55-3-----	4-Bromophenyl-phenylether	470	U	
118-74-1-----	Hexachlorobenzene	470	U	
87-86-5-----	Pentachlorophenol	1200	U	
85-01-8-----	Phenanthrene	41	J	
120-12-7-----	Anthracene	470	U	
86-74-8-----	Carbazole	470	U	
84-74-2-----	Di-n-butylphthalate	44	J	
206-44-0-----	Fluoranthene	69	J	
129-00-0-----	Pyrene	89	J	
85-68-7-----	Butylbenzylphthalate	77	J	
91-94-1-----	3,3'-Dichlorobenzidine	470	U	
56-55-3-----	Benzo(a)anthracene	27	J	
218-01-9-----	Chrysene	47	J	
117-81-7-----	bis(2-Ethylhexyl)phthalate	470	110	JB
117-84-0-----	Di-n-octylphthalate	26	J	
205-99-2-----	Benzo(b)fluoranthene	470	U	
207-08-9-----	Benzo(k)fluoranthene	53	J	
50-32-8-----	Benzo(a)pyrene	470	U	
193-39-5-----	Indeno(1,2,3-cd)pyrene	470	U	
53-70-3-----	Dibenzo(a,h)anthracene	470	U	
191-24-2-----	Benzo(g,h,i)perylene	470	U	

(1) - Cannot be separated from Diphenylamine

000804

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

EBHL8RE

b Name: ATAS, INC. Contract: 68-D5-0018

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: AA5991.D

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: 30 decanted: (Y/N) N Date Extracted: 07/18/96

Concentrated Extract Volume: 500 (uL) Date Analyzed: 07/25/96

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

CONCENTRATION UNITS:

Number TICs found: 17

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 123-42-2	2-Pentanone, 4-hydroxy-4-met	4.580	1700	A NJB
2.	Unknown	4.684	180	J
3.	Unknown	5.490	190	J
4.	Unknown	5.730	220	J
5.	Unknown	5.939	470	JB
6.	Unknown	6.059	300	JB
7.	Unknown	6.450	470	J
8. 65-85-0	Benzoic Acid	8.289	140	NJ
9.	Unknown	12.740	170	J
10. 544-63-8	Tetradecanoic acid	13.134	240	NJ
11.	Unknown	13.560	200	J
12. 106-02-5	Oxacyclohexadecan-2-one	14.361	550	NJ
13. 57-10-3	Hexadecanoic acid	14.455	740	NJ
14.	Unknown	15.152	1000	J
15.	Unknown	15.972	360	J
16.	Unknown	19.067	980	J
17.	Unknown	21.639	1900	J
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
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30.				

000805

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

PBLK1S

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 071896-01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: _____ decanted: (Y/N) _____ Date Received: _____

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	1.7		U
319-85-7-----	beta-BHC	1.7		U
319-86-8-----	delta-BHC	1.7		U
58-89-9-----	gamma-BHC (Lindane)	1.7		U
76-44-8-----	Heptachlor	0.16		PJ
309-00-2-----	Aldrin	1.7		U
1024-57-3-----	Heptachlor epoxide	1.7		U
959-98-8-----	Endosulfan I	1.7		U
60-57-1-----	Dieldrin	3.3		U
72-55-9-----	4,4'-DDE	3.3		U
72-20-8-----	Endrin	3.3		U
33213-65-9-----	Endosulfan II	3.3		U
72-54-8-----	4,4'-DDD	3.3		U
1031-07-8-----	Endosulfan sulfate	3.3		U
50-29-3-----	4,4'-DDT	3.3		U
72-43-5-----	Methoxychlor	17		U
53494-70-5-----	Endrin ketone	3.3		U
7421-93-4-----	Endrin aldehyde	3.3		U
5103-71-9-----	alpha-Chlordane	1.7		U
5103-74-2-----	gamma-Chlordane	1.7		U
8001-35-2-----	Toxaphene	170		U
12674-11-2-----	Aroclor-1016	33		U
11104-28-2-----	Aroclor-1221	67		U
11141-16-5-----	Aroclor-1232	33		U
53469-21-9-----	Aroclor-1242	33		U
12672-29-6-----	Aroclor-1248	33		U
11097-69-1-----	Aroclor-1254	33		U
11096-82-5-----	Aroclor-1260	33		U

001368

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK2

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.01

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 19 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	2.1	U	
319-85-7-----	beta-BHC	2.1	U	
319-86-8-----	delta-BHC	2.1	U	
58-89-9-----	gamma-BHC (Lindane)	2.1	U	
76-44-8-----	Heptachlor	0.32	μ PJB	act 9-3-46
309-00-2-----	Aldrin	2.1	U	
1024-57-3-----	Heptachlor epoxide	2.1	U	
959-98-8-----	Endosulfan I	2.1	U	
60-57-1-----	Dieldrin	4.1	U	
72-55-9-----	4,4'-DDE	4.1	U	
72-20-8-----	Endrin	4.1	U	
33213-65-9-----	Endosulfan II	4.1	U	
72-54-8-----	4,4'-DDD	4.1	U	
1031-07-8-----	Endosulfan sulfate	4.1	U	
50-29-3-----	4,4'-DDT	4.1	U	
72-43-5-----	Methoxychlor	0.91	PJ	
53494-70-5-----	Endrin ketone	4.1	U	
7421-93-4-----	Endrin aldehyde	4.1	U	
5103-71-9-----	alpha-Chlordane	2.1	U	
5103-74-2-----	gamma-Chlordane	2.1	U	
8001-35-2-----	Toxaphene	210	U	
12674-11-2-----	Aroclor-1016	41	U	
11104-28-2-----	Aroclor-1221	83	U	
11141-16-5-----	Aroclor-1232	41	U	
53469-21-9-----	Aroclor-1242	41	U	
12672-29-6-----	Aroclor-1248	41	U	
11097-69-1-----	Aroclor-1254	41	U	
11096-82-5-----	Aroclor-1260	41	U	

001254

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK3

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.04

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: _____

% Moisture: 35 decanted: (Y/N) N

Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.3

Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

Q

319-84-6-----alpha-BHC	0.39	PJ
319-85-7-----beta-BHC	2.6	U
319-86-8-----delta-BHC	2.6	U
58-89-9-----gamma-BHC (Lindane)	2.6	U
76-44-8-----Heptachlor	2.6	U
309-00-2-----Aldrin	2.6	U
1024-57-3-----Heptachlor epoxide	2.6	U
959-98-8-----Endosulfan I	2.6	U
60-57-1-----Dieldrin	3.1	J
72-55-9-----4,4'-DDE	5.1	U
72-20-8-----Endrin	5.1	U
33213-65-9-----Endosulfan II	5.1	U
72-54-8-----4,4'-DDD	3.0	J
1031-07-8-----Endosulfan sulfate	5.1	U
50-29-3-----4,4'-DDT	5.1	U
72-43-5-----Methoxychlor	6.1	PJ
53494-70-5-----Endrin ketone	3.7	PJ
7421-93-4-----Endrin aldehyde	5.1	U
5103-71-9-----alpha-Chlordane	2.6	U
5103-74-2-----gamma-Chlordane	2.6	U
8001-35-2-----Toxaphene	260	U
12674-11-2-----Aroclor-1016	51	U
11104-28-2-----Aroclor-1221	100	U
11141-16-5-----Aroclor-1232	51	U
53469-21-9-----Aroclor-1242	57	U
12672-29-6-----Aroclor-1248	51	U
11097-69-1-----Aroclor-1254	51	U
11096-82-5-----Aroclor-1260	51	U

001267

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK4

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.05

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 41 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	14	U	
319-85-7-----	beta-BHC	14	U	
319-86-8-----	delta-BHC	14	U	
58-89-9-----	gamma-BHC (Lindane)	14	U	
76-44-8-----	Heptachlor	14	U	
309-00-2-----	Aldrin	14	U	
1024-57-3-----	Heptachlor epoxide	14	U	
959-98-8-----	Endosulfan I	14	U	
60-57-1-----	Dieldrin	2.9	PJ	.
72-55-9-----	4,4'-DDE	28	U	
72-20-8-----	Endrin	28	U	
33213-65-9-----	Endosulfan II	28	U	
72-54-8-----	4,4'-DDD	1.7	PJ	.
1031-07-8-----	Endosulfan sulfate	28	U	
50-29-3-----	4,4'-DDT	6.6	PJ	.
72-43-5-----	Methoxychlor	140	U	
53494-70-5-----	Endrin ketone	28	U	
7421-93-4-----	Endrin aldehyde	28	U	
5103-71-9-----	alpha-Chlordane	0.90	PJ	.
5103-74-2-----	gamma-Chlordane	2.8	PJ	.
8001-35-2-----	Toxaphene	1400	U	
12674-11-2-----	Aroclor-1016	280	U	
11104-28-2-----	Aroclor-1221	570	U	
11141-16-5-----	Aroclor-1232	280	U	
53469-21-9-----	Aroclor-1242	280	U	
12672-29-6-----	Aroclor-1248	280	U	
11097-69-1-----	Aroclor-1254	280	U	
11096-82-5-----	Aroclor-1260	280	U	

001310

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK5

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.06

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: _____

% Moisture: 42 decanted: (Y/N) N

Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/18/96

Concentrated Extract Volume: 5000(uL)

Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL)

Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 7.5

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
---------	----------	---	---

319-84-6-----	alpha-BHC	9.0	J
319-85-7-----	beta-BHC	29	U
319-86-8-----	delta-BHC	29	U
58-89-9-----	gamma-BHC (Lindane)	29	U
76-44-8-----	Heptachlor	29	U
309-00-2-----	Aldrin	29	U
1024-57-3-----	Heptachlor epoxide	29	U
959-98-8-----	Endosulfan I	29	U
60-57-1-----	Dieldrin	57	U
72-55-9-----	4,4'-DDE	57	U
72-20-8-----	Endrin	57	U
33213-65-9-----	Endosulfan II	57	U
72-54-8-----	4,4'-DDD	57	U
1031-07-8-----	Endosulfan sulfate	57	U
50-29-3-----	4,4'-DDT	57	U
72-43-5-----	Methoxychlor	290	U
53494-70-5-----	Endrin ketone	57	U
7421-93-4-----	Endrin aldehyde	57	U
5103-71-9-----	alpha-Chlordane	29	U
5103-74-2-----	gamma-Chlordane	29	U
8001-35-2-----	Toxaphene	2900	U
12674-11-2-----	Aroclor-1016	570	U
11104-28-2-----	Aroclor-1221	1200	U
11141-16-5-----	Aroclor-1232	570	U
53469-21-9-----	Aroclor-1242	570	U
12672-29-6-----	Aroclor-1248	210	JP
11097-69-1-----	Aroclor-1254	570	U
11096-82-5-----	Aroclor-1260	140	JP

001332

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK6

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.07

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 47 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
319-84-6-----	alpha-BHC	16	U	
319-85-7-----	beta-BHC	16	U	
319-86-8-----	delta-BHC	16	U	
58-89-9-----	gamma-BHC (Lindane)	16	U	
76-44-8-----	Heptachlor	16	U	
309-00-2-----	Aldrin	16	U	
1024-57-3-----	Heptachlor epoxide	16	U	
959-98-8-----	Endosulfan I	16	U	
60-57-1-----	Dieldrin	3.1	PJ	.
72-55-9-----	4, 4'-DDE	2.0	PJ	.
72-20-8-----	Endrin	31	U	
33213-65-9-----	Endosulfan II	3.3	PJ	.
72-54-8-----	4, 4'-DDD	4.2	J	.
1031-07-8-----	Endosulfan sulfate	31	U	
50-29-3-----	4, 4'-DDT	8.2	PJ	.
72-43-5-----	Methoxychlor	160	U	
53494-70-5-----	Endrin ketone	31	U	
7421-93-4-----	Endrin aldehyde	31	U	
5103-71-9-----	alpha-Chlordane	16	U	
5103-74-2-----	gamma-Chlordane	1.4	PJ	.
8001-35-2-----	Toxaphene	1600	U	
12674-11-2-----	Aroclor-1016	310	U	
11104-28-2-----	Aroclor-1221	630	U	
11141-16-5-----	Aroclor-1232	310	U	
53469-21-9-----	Aroclor-1242	310	U	
12672-29-6-----	Aroclor-1248	310	U	
11097-69-1-----	Aroclor-1254	310	U	
11096-82-5-----	Aroclor-1260	310	U	

001383

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK7

Lab Code: ATAS

Case No.: 24831

SAS No.:

SDG No.: EBHK2

Matrix: (soil/water) SOIL

Lab Sample ID: 16199.08

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: _____

% Moisture: 46 decanted: (Y/N) N

Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC

Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL)

Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL)

Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y pH: 7.0

Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG Q		
---------	----------	---	--	--

319-84-6-----alpha-BHC		16	U	
319-85-7-----beta-BHC		16	U	
319-86-8-----delta-BHC		16	U	
58-89-9-----gamma-BHC (Lindane)		16	U	
76-44-8-----Heptachlor		16	U	
309-00-2-----Aldrin		16	U	
1024-57-3-----Heptachlor epoxide		16	U	
959-98-8-----Endosulfan I		16	U	
60-57-1-----Dieldrin		1.4	PJ	.
72-55-9-----4,4'-DDE		2.9	PJ	.
72-20-8-----Endrin		30	U	
33213-65-9-----Endosulfan II		30	U	
72-54-8-----4,4'-DDD		4.1	PJ	.
1031-07-8-----Endosulfan sulfate		30	U	
50-29-3-----4,4'-DDT		5.9	PJ	.
72-43-5-----Methoxychlor		160	U	
53494-70-5-----Endrin ketone		4.3	J	.
7421-93-4-----Endrin aldehyde		30	U	
5103-71-9-----alpha-Chlordane		16	U	
5103-74-2-----gamma-Chlordane		16	U	
8001-35-2-----Toxaphene		1600	U	
12674-11-2-----Aroclor-1016		300	U	
11104-28-2-----Aroclor-1221		620	U	
11141-16-5-----Aroclor-1232		300	U	
53469-21-9-----Aroclor-1242		300	U	
12672-29-6-----Aroclor-1248		300	U	
11097-69-1-----Aroclor-1254		300	U	
11096-82-5-----Aroclor-1260		300	U	

001405

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK8

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.09

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 34 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 5.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	13	U
319-85-7-----	beta-BHC	13	U
319-86-8-----	delta-BHC	13	U
58-89-9-----	gamma-BHC (Lindane)	13	U
76-44-8-----	Heptachlor	13	U
309-00-2-----	Aldrin	13	U
1024-57-3-----	Heptachlor epoxide	13	U
959-98-8-----	Endosulfan I	13	U
60-57-1-----	Dieldrin	25	U
72-55-9-----	4,4'-DDE	25	U
72-20-8-----	Endrin	25	U
33213-65-9-----	Endosulfan II	25	U
72-54-8-----	4,4'-DDD	25	U
1031-07-8-----	Endosulfan sulfate	25	U
50-29-3-----	4,4'-DDT	25	U
72-43-5-----	Methoxychlor	130	U
53494-70-5-----	Endrin ketone	25	U
7421-93-4-----	Endrin aldehyde	25	U
5103-71-9-----	alpha-Chlordane	13	U
5103-74-2-----	gamma-Chlordane	13	U
8001-35-2-----	Toxaphene	1300	U
12674-11-2-----	Aroclor-1016	250	U
11104-28-2-----	Aroclor-1221	510	U
11141-16-5-----	Aroclor-1232	250	U
53469-21-9-----	Aroclor-1242	250	U
12672-29-6-----	Aroclor-1248	250	U
11097-69-1-----	Aroclor-1254	250	U
11096-82-5-----	Aroclor-1260	360	U

001430

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHK9

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.10

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 37 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 7.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	2.7	U	
319-85-7-----	beta-BHC	2.7	U	
319-86-8-----	delta-BHC	2.7	U	
58-89-9-----	gamma-BHC (Lindane)	2.7	U	
76-44-8-----	Heptachlor	2.7	U	
309-00-2-----	Aldrin	2.7	U	
1024-57-3-----	Heptachlor epoxide	2.7	U	
959-98-8-----	Endosulfan I	2.7	U	
60-57-1-----	Dieldrin	0.85	PJ	.
72-55-9-----	4,4'-DDE	0.39	PJ	.
72-20-8-----	Endrin	5.2	U	
33213-65-9-----	Endosulfan II	5.2	U	
72-54-8-----	4,4'-DDD	0.55	PJ	.
1031-07-8-----	Endosulfan sulfate	5.2	U	
50-29-3-----	4,4'-DDT	1.1	PJ	.
72-43-5-----	Methoxychlor	27	U	
53494-70-5-----	Endrin ketone	0.87	PJ	.
7421-93-4-----	Endrin aldehyde	5.2	U	
5103-71-9-----	alpha-Chlordane	1.5	PJ	.
5103-74-2-----	gamma-Chlordane	0.65	J	.
8001-35-2-----	Toxaphene	270	U	
12674-11-2-----	Aroclor-1016	52	U	
11104-28-2-----	Aroclor-1221	110	U	
11141-16-5-----	Aroclor-1232	52	U	
53469-21-9-----	Aroclor-1242	52	U	
12672-29-6-----	Aroclor-1248	52	U	
11097-69-1-----	Aroclor-1254	52	U	
11096-82-5-----	Aroclor-1260	52	U	

001472

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHLO

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.11

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 28 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG Q

319-84-6-----alpha-BHC	2.4	U
319-85-7-----beta-BHC	2.4	U
319-86-8-----delta-BHC	2.4	U
58-89-9-----gamma-BHC (Lindane)	2.4	U
76-44-8-----Heptachlor	2.4	U
309-00-2-----Aldrin	2.4	U
1024-57-3-----Heptachlor epoxide	2.4	U
959-98-8-----Endosulfan I	2.4	U
60-57-1-----Dieldrin	4.6	U
72-55-9-----4,4'-DDE	4.6	U
72-20-8-----Endrin	4.6	U
33213-65-9-----Endosulfan II	4.6	U
72-54-8-----4,4'-DDD	4.6	U
1031-07-8-----Endosulfan sulfate	4.6	U
50-29-3-----4,4'-DDT	4.6	U
72-43-5-----Methoxychlor	24	U
53494-70-5-----Endrin ketone	4.6	U
7421-93-4-----Endrin aldehyde	4.6	U
5103-71-9-----alpha-Chlordane	0.80	PJ
5103-74-2-----gamma-Chlordane	2.4	U
8001-35-2-----Toxaphene	240	U
12674-11-2-----Aroclor-1016	46	U
11104-28-2-----Aroclor-1221	93	U
11141-16-5-----Aroclor-1232	46	U
53469-21-9-----Aroclor-1242	46	U
12672-29-6-----Aroclor-1248	46	U
11097-69-1-----Aroclor-1254	46	U
11096-82-5-----Aroclor-1260	68	P

001501

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHL7

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.12

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 35 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
---------	----------	---	-------	---

319-84-6-----	alpha-BHC	2.6	U
319-85-7-----	beta-BHC	2.6	U
319-86-8-----	delta-BHC	2.6	U
58-89-9-----	gamma-BHC (Lindane)	2.6	U
76-44-8-----	Heptachlor	2.6	U
309-00-2-----	Aldrin	2.6	U
1024-57-3-----	Heptachlor epoxide	2.6	U
959-98-8-----	Endosulfan I	2.6	U
60-57-1-----	Dieldrin	5.1	U
72-55-9-----	4,4'-DDE	5.1	U
72-20-8-----	Endrin	5.1	U
33213-65-9-----	Endosulfan II	5.1	U
72-54-8-----	4,4'-DDD	5.1	U
1031-07-8-----	Endosulfan sulfate	5.1	U
50-29-3-----	4,4'-DDT	5.1	U
72-43-5-----	Methoxychlor	26	U
53494-70-5-----	Endrin ketone	5.1	U
7421-93-4-----	Endrin aldehyde	5.1	U
5103-71-9-----	alpha-Chlordane	2.6	U
5103-74-2-----	gamma-Chlordane	2.6	U
8001-35-2-----	Toxaphene	260	U
12674-11-2-----	Aroclor-1016	51	U
11104-28-2-----	Aroclor-1221	100	U
11141-16-5-----	Aroclor-1232	51	U
53469-21-9-----	Aroclor-1242	51	U
12672-29-6-----	Aroclor-1248	530	P
11097-69-1-----	Aroclor-1254	51	U
11096-82-5-----	Aroclor-1260	240	P

001546

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: ATAS, INC.

Contract: 68-D5-0018

EBHL8

Lab Code: ATAS Case No.: 24831 SAS No.: SDG No.: EBHK2

Matrix: (soil/water) SOIL Lab Sample ID: 16199.13

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 30 decanted: (Y/N) N Date Received: 07/11/96

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 07/18/96

Concentrated Extract Volume: 5000(uL) Date Analyzed: 08/09/96

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	UG/KG	Q
319-84-6-----	alpha-BHC	2.4	U	
319-85-7-----	beta-BHC	2.4	U	
319-86-8-----	delta-BHC	2.4	U	
58-89-9-----	gamma-BHC (Lindane)	2.4	U	
76-44-8-----	Heptachlor	0.44	μ PJB	
309-00-2-----	Aldrin	2.4	U	
1024-57-3-----	Heptachlor epoxide	2.4	U	
959-98-8-----	Endosulfan I	2.4	U	
60-57-1-----	Dieldrin	0.53	J	
72-55-9-----	4,4'-DDE	0.84	J	
72-20-8-----	Endrin	4.7	U	
33213-65-9-----	Endosulfan II	4.7	U	
72-54-8-----	4,4'-DDD	0.49	PJ	
1031-07-8-----	Endosulfan sulfate	4.7	U	
50-29-3-----	4,4'-DDT	1.2	PJ	
72-43-5-----	Methoxychlor	24	U	
53494-70-5-----	Endrin ketone	4.7	U	
7421-93-4-----	Endrin aldehyde	4.7	U	
5103-71-9-----	alpha-Chlordane	0.67	PJ	
5103-74-2-----	gamma-Chlordane	0.37	PJ	
8001-35-2-----	Toxaphene	240	U	
12674-11-2-----	Aroclor-1016	47	U	
11104-28-2-----	Aroclor-1221	96	U	
11141-16-5-----	Aroclor-1232	47	U	
53469-21-9-----	Aroclor-1242	47	U	
12672-29-6-----	Aroclor-1248	47	U	
11097-69-1-----	Aroclor-1254	47	U	
11096-82-5-----	Aroclor-1260	47	U	

act
9-3-96

001595

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 08-29-96

SUBJECT: Review of Region V CLP Data
Received for Review on _____

Aug 16, 1996

FROM: Stephen L. Ostrodka, Chief (HSRL-5J)
Superfund Technical Support Section

L. Finkelberg

TO: Data User: IEPA

We have reviewed the data for the following case:

SITE NAME: Banner Western Disp. (1c)

CASE NUMBER: 24831 SDG NUMBER: MEAPT4

Number and Type of Samples: 11 (Soil)

Sample Numbers: MEAPT 4-9 MEAPW1-4

Laboratory: Skinner Hrs. for Review: 11+0.5=11.5

Following are our findings:

All data are usable (see attached narrative)

L. Finkelberg

RECEIVED

SEP 11 1996

IEPA/DLPC

cc: Regional TPO
Brian Freeman
HSMC-5J

NARRATIVE

SITE: BANNER WESTERN DISP (IL)
LABORATORY: SKINNER

CASE: 24831
SDG: MEAPT4

The laboratory's portion of case 24731 contains 10 low level soil samples assayed for total metals and cyanide. The following narrative lists the out of control audits and their possible effects on the results.

EVIDENTIAL AUDIT: All forms, most of the raw data, c-o-c forms, airbill and the sample tags are originals. The original pp.53-65, 76-77, 85-89 and 91-95 from the ICP raw data are with 24879/MCRO25. The original Hg raw data are with 24861/MDLL62. All other forms are present in the order indicated on the Form DC-2 [inventory sheet].

ICP ANALYSES: The matrix spike recovery for Sb (65.5% R) was out of control. All Sb results are estimated (UJ) due to possible elevation of the detection limit.

The duplicate result for Cu (40.0 % RPD) was not flagged by the laboratory because the duplicate difference does not exceed the technical criterion for the soil samples (+/-2XCRDL). The Cu data are acceptable.

W/JLW 8/21/96 *47.6%*
The duplicate for Al (46.7% RPD) was out of control. All Al data are estimated (J) due to poor precision.

The duplicate results for As (200% RPD) and for Cr (113.3% RPD) were flagged (*) by the laboratory but the duplicate difference did not exceed the technical criterion for soils (+/-2XCRDL). The As data are acceptable. The CCB was found to contain Cr (6.5 ug/L). The Cr result for MEAPT4 is estimated (J) due to contamination, the rest of the Cr data are acceptable.

The matrix spike recovery for Se (59.8% R) was out of control. All Se results are estimated (UJ) due to possible elevation of the detection limit.

*W/JLW
8/21/96* *53.4%*
The duplicate audits for Ni (54.3% RPD) and Zn (59% RPD) were not flagged by the lab because the duplicate differences did not exceed the technical criterion for soil samples (+/-2XCRDL). The preparation blank contained Ni (3.304 ug/L) and Zn (2.454 ug/L). Ni and Zn results for MEAPT4 and Ni result for MEAPW4 are estimated (J) due to contamination, the rest results are acceptable.

Reviewed by: L. Leonova Larisa Leonova,
Date: 8/20/96

The CCBs were found to contain Be (1.1 ug/L), Cd (1.4 ug/L), Ag (5.6 ug/L), Na (383.9 ug/L) and V (4.5 ug/L). The Cd results for MEAPT5 and T7; all Be results; the Ag results for MEAPT9 and W2; the Na results for MEAPT4-5, 7-9 and W4 and V result for MEAPT4 are estimated (J) due to contamination.

OTHER ANALYSES: The matrix spike for CN (39.8% R) was out of control. All CN data are estimated (UJ) due to possible elevation of the detection limit.

The Hg data are acceptable.

Reviewed by: L. Leonova Larisa Leonova,
Date: 8/20/96

DATA QUALIFIER DEFINITIONS

For the purpose of defining the flagging nomenclature utilized in this document, the following code letters and associated definitions are provided:

- U** Indicates the material was analyzed, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
- J** Indicates the associated value is an estimated quantity.
- R** Indicates the data are unusable. (Note: The analyte may or may not be present.)
- UJ** Indicates the material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
- E** Indicates the reported value is estimated because of the presence of interferences. An explanatory note shall be included under Comments on the Cover Page (if the problem applies to all samples) or on the specific FORM I-IN (if it is an isolated problem).
- M** Indicates duplicate injection precision is not met.
- N** Indicates the spike sample recovery is not within control limits.
- S** Indicates the reported value was determined by the Method of Standard Addition (MSA).
- W** Indicates the post-digestion spike for furnace AA analysis is out of control limits (85%-115%), while sample absorbance is less than 50% of the spike absorbance.
- +** Indicates the correlation coefficient for the MSA is less than 0.995.
- *** Indicates the duplicate analysis is not within control limits.

Note: Entering "S", "W" or "+" is mutually exclusive. No combination of these qualifiers can appear in the same field for an analyte.

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

SOW No.: ILM04.0

EPA Sample No.	Lab Sample ID.
MEAPT4	07074-01S
MEAPT4D	07074-01S2
MEAPT4S	07074-01DS
MEAPT5	07074-02S
MEAPT6	07074-03S
MEAPT7	07074-04S
MEAPT8	07074-05S
MEAPT9	07074-06S
MEAPW0	07074-07S
MEAPW1	07074-08S
MEAPW2	07074-09S
MEAPW3	07074-10S
MEAPW4	07074-11S

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AUG 16 1996

US EPA CENTRAL REGIONAL LAB.
536 S. CLARK ST.
CHICAGO, ILLINOIS 60605

Were ICP interelement corrections applied?

Yes/No YES

Were ICP background corrections applied?

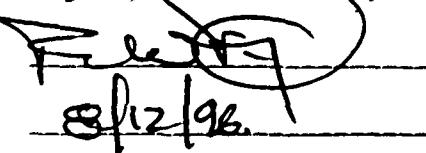
Yes/No YES

If yes-were raw data generated before
application of background corrections?

Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: 

Name: Richard P. Purdy

Date: 8/12/96

Title: CLP Program Manager

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

MEAPT4

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-01S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 77.1

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2080		*	P
7440-36-0	Antimony	2.4	U	N	P
7440-38-2	Arsenic	2.6		*	P
7440-39-3	Barium	8.9	B		P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	0.25	U		P
7440-70-2	Calcium	155000			P
7440-47-3	Chromium	5.6		*	P
7440-48-4	Cobalt	2.4	B		P
7440-50-8	Copper	3.7	B		P
7439-89-6	Iron	3850			P
7439-92-1	Lead	2.4			P
7439-95-4	Magnesium	90400			P
7439-96-5	Manganese	260			P
7439-97-6	Mercury	0.06	U		CV
7440-02-0	Nickel	4.9	B		P
7440-09-7	Potassium	1280			P
7782-49-2	Selenium	1.0	U	N	P
7440-22-4	Silver	0.78	U		P
7440-23-5	Sodium	124	B		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	5.0	B		P
7440-66-6	Zinc	3.6	B		P
	Cyanide	0.27	U	N	CA

Color Before: GRAY

Clarity Before:

Texture: FINE

Color After: GRAY

Clarity After:

Artifacts:

Comments:

000002

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPT5

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-05-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-02S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 71.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8620		*	P
7440-36-0	Antimony	2.5	U	N	P
7440-38-2	Arsenic	12.2		*	P
7440-39-3	Barium	61.1			P
7440-41-7	Beryllium	0.55	B		P
7440-43-9	Cadmium	0.95	B		P
7440-70-2	Calcium	60400			P
7440-47-3	Chromium	17.4		*	P
7440-48-4	Cobalt	13.6			P
7440-50-8	Copper	24.0			P
7439-89-6	Iron	23500			P
7439-92-1	Lead	21.5			P
7439-95-4	Magnesium	28300			P
7439-96-5	Manganese	716			P
7439-97-6	Mercury	0.08	B		CV
7440-02-0	Nickel	45.8			P
7440-09-7	Potassium	1720			P
7782-49-2	Selenium	1.0	U	N	P
7440-22-4	Silver	0.80	U		P
7440-23-5	Sodium	190	B		P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	21.0			P
7440-66-6	Zinc	729			P
	Cyanide	0.29	U	N	CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts: YES

Comments:

ROOTS

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPT6

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-DS-0062

Lab Code: SKINNER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-03S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 56.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration C	Q	M
7429-90-5	Aluminum	9070	*	P
7440-36-0	Antimony	3.1	U	P
7440-38-2	Arsenic	6.9	*	P
7440-39-3	Barium	45.7	B	P
7440-41-7	Beryllium	0.58	B	P
7440-43-9	Cadmium	0.32	U	P
7440-70-2	Calcium	63600		P
7440-47-3	Chromium	19.6	*	P
7440-48-4	Cobalt	10.4	B	P
7440-50-8	Copper	23.6		P
7439-89-6	Iron	20100		P
7439-92-1	Lead	21.4		P
7439-95-4	Magnesium	29300		P
7439-96-5	Manganese	688		P
7439-97-6	Mercury	0.08	U	CV
7440-02-0	Nickel	24.5		P
7440-09-7	Potassium	2470		P
7782-49-2	Selenium	1.3	U	P
7440-22-4	Silver	1.0	U	P
7440-23-5	Sodium	928	B	P
7440-28-0	Thallium	1.8	U	P
7440-62-2	Vanadium	21.9		P
7440-66-6	Zinc	94.0		P
	Cyanide	0.37	U	CA

Color Before: GRAY Clarity Before: Texture: FINE

Color After: GRAY Clarity After: Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPT7

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-04S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 61.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16100		*	P
7440-36-0	Antimony	3.0	U	N	P
7440-38-2	Arsenic	4.8		*	P
7440-39-3	Barium	276			P
7440-41-7	Beryllium	0.93	B		P
7440-43-9	Cadmium	0.40	B		P
7440-70-2	Calcium	37000			P
7440-47-3	Chromium	73.6		*	P
7440-48-4	Cobalt	12.8	B		P
7440-50-8	Copper	121			P
7439-89-6	Iron	28100			P
7439-92-1	Lead	65.3			P
7439-95-4	Magnesium	21600			P
7439-96-5	Manganese	319			P
7439-97-6	Mercury	0.13	B		CV
7440-02-0	Nickel	53.4			P
7440-09-7	Potassium	3410			P
7782-49-2	Selenium	1.2	U	N	P
7440-22-4	Silver	0.96	U		P
7440-23-5	Sodium	352	B		P
7440-28-0	Thallium	1.8	U		P
7440-62-2	Vanadium	33.7			P
7440-66-6	Zinc	357			P
	Cyanide	0.34	U	N	CA

Color Before: BLACK

Clarity Before:

Texture: FINE

Color After: BLACK

Clarity After:

Artifacts:

Comments:

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPT8

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-05S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 50.3

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12500		*	P
7440-36-0	Antimony	3.7	U	N	P
7440-38-2	Arsenic	13.2		*	P
7440-39-3	Barium	123			P
7440-41-7	Beryllium	0.80	B		P
7440-43-9	Cadmium	3.4			P
7440-70-2	Calcium	105000			P
7440-47-3	Chromium	35.1		*	P
7440-48-4	Cobalt	13.1	B		P
7440-50-8	Copper	45.6			P
7439-89-6	Iron	28500			P
7439-92-1	Lead	59.6			P
7439-95-4	Magnesium	40600			P
7439-96-5	Manganese	1110			P
7439-97-6	Mercury	0.16	B		CV
7440-02-0	Nickel	30.3			P
7440-09-7	Potassium	2710			P
7782-49-2	Selenium	1.5	U	N	P
7440-22-4	Silver	1.2	U		P
7440-23-5	Sodium	352	B		P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	29.5			P
7440-66-6	Zinc	202			P
	Cyanide	0.40	U	N	CA

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts: YES

Comments:
ROOTS

000006

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPT9

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-06S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 49.6

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10800	*	P	
7440-36-0	Antimony	3.7	U	N	P
7440-38-2	Arsenic	14.3		*	P
7440-39-3	Barium	130		P	
7440-41-7	Beryllium	0.80	B		P
7440-43-9	Cadmium	3.0		P	
7440-70-2	Calcium	101000		P	
7440-47-3	Chromium	30.8		*	P
7440-48-4	Cobalt	13.0	B		P
7440-50-8	Copper	42.7		P	
7439-89-6	Iron	28200		P	
7439-92-1	Lead	61.7		P	
7439-95-4	Magnesium	33100		P	
7439-96-5	Manganese	1240		P	
7439-97-6	Mercury	0.11	B	CV	
7440-02-0	Nickel	28.1		P	
7440-09-7	Potassium	2290		P	
7782-49-2	Selenium	1.5	U	N	P
7440-22-4	Silver	1.5	B		P
7440-23-5	Sodium	362	B		P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	27.7		P	
7440-66-6	Zinc	207		P	
	Cyanide	0.40	U	N	CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:

ROOTS

00000'7

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPWO

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINNER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-07S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 68.8

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10600		*	P
7440-36-0	Antimony	2.7	U	N	P
7440-38-2	Arsenic	7.9		*	P
7440-39-3	Barium	89.8			P
7440-41-7	Beryllium	0.62	B		P
7440-43-9	Cadmium	2.9			P
7440-70-2	Calcium	49100			P
7440-47-3	Chromium	29.7		*	P
7440-48-4	Cobalt	11.2	B		P
7440-50-8	Copper	48.8			P
7439-89-6	Iron	24300			P
7439-92-1	Lead	59.1			P
7439-95-4	Magnesium	18600			P
7439-96-5	Manganese	480			P
7439-97-6	Mercury	0.16			CV
7440-02-0	Nickel	32.2			P
7440-09-7	Potassium	2670			P
7782-49-2	Selenium	1.1	U	N	P
7440-22-4	Silver	0.88	U		P
7440-23-5	Sodium	1760			P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	27.6			P
7440-66-6	Zinc	190			P
	Cyanide	0.30	U	N	CA

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:
ROOTS

000008

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPW1

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-05-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-08S

Level (low/med): LOW Date Received: 07/11/96

Solids: 59.9

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	11200	*	P	
7440-36-0	Antimony	2.7	U	N	P
7440-38-2	Arsenic	16.2		*	P
7440-39-3	Barium	101			P
7440-41-7	Beryllium	0.61	B		P
7440-43-9	Cadmium	0.28	U		P
7440-70-2	Calcium	49200			P
7440-47-3	Chromium	17.7		*	P
7440-48-4	Cobalt	12.6	B		P
7440-50-8	Copper	24.5			P
7439-89-6	Iron	41200			P
7439-92-1	Lead	21.1			P
7439-95-4	Magnesium	22800			P
7439-96-5	Manganese	984			P
7439-97-6	Mercury	0.07	U		CV
7440-02-0	Nickel	26.2			P
7440-09-7	Potassium	2440			P
7782-49-2	Selenium	1.1	U	N	P
7440-22-4	Silver	0.86	U		P
7440-23-5	Sodium	1270	B		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	28.5			P
7440-66-6	Zinc	77.8			P
	Cyanide	0.30	U	N	CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:
ROOTS

000009

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPW2

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-09S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 63.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5900		*	P
7440-36-0	Antimony	2.8	U	N	P
7440-38-2	Arsenic	35.6		*	P
7440-39-3	Barium	101			P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	32.2			P
7440-70-2	Calcium	104000			P
7440-47-3	Chromium	97.8		*	P
7440-48-4	Cobalt	21.6			P
7440-50-8	Copper	208			P
7439-89-6	Iron	45000			P
7439-92-1	Lead	146			P
7439-95-4	Magnesium	33500			P
7439-96-5	Manganese	547			P
7439-97-6	Mercury	0.42			CV
7440-02-0	Nickel	177			P
7440-09-7	Potassium	1180	B		P
7782-49-2	Selenium	1.2	U	N	P
7440-22-4	Silver	2.1	B		P
7440-23-5	Sodium	741	B		P
7440-28-0	Thallium	3.0			P
7440-62-2	Vanadium	17.3			P
7440-66-6	Zinc	4360			P
	Cyanide	0.32	U	N	CA

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: Artifacts:

Comments:
ROOTS

000010

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPW3

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-10S

Level (low/med): LOW Date Received: 07/11/96

Solids: 65.2

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6280	*	P	
7440-36-0	Antimony	2.8	U	N	P
7440-38-2	Arsenic	11.6		*	P
7440-39-3	Barium	111			P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	2.7			P
7440-70-2	Calcium	67200			P
7440-47-3	Chromium	19.2		*	P
7440-48-4	Cobalt	8.3	B		P
7440-50-8	Copper	38.0			P
7439-89-6	Iron	41200			P
7439-92-1	Lead	45.1			P
7439-95-4	Magnesium	29000			P
7439-96-5	Manganese	634			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	23.3			P
7440-09-7	Potassium	1870			P
7782-49-2	Selenium	1.2	U	N	P
7440-22-4	Silver	0.91	U		P
7440-23-5	Sodium	1030	B		P
7440-28-0	Thallium	1.7	U		P
7440-62-2	Vanadium	17.7			P
7440-66-6	Zinc	217			P
	Cyanide	0.31	U	N	CA

Color Before: BROWN

Clarity Before:

Texture: FINE

Color After: BROWN

Clarity After:

Artifacts:

Comments:

ROOTS

000011

EPA SAMPLE NO.

INORGANIC ANALYSIS DATA SHEET

MEAPW4

Lab Name: THERMO ANALYTICAL, INC. Contract: 68-D5-0062

Lab Code: SKINER Case No.: 24831 SAS No.: SDG No.: MEAPT4

Matrix (soil/water): SOIL Lab Sample ID: 07074-11S

Level (low/med): LOW Date Received: 07/11/96

% Solids: 65.5

Concentration Units (ug/L or mg/Kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5120		*	P
7440-36-0	Antimony	2.7	U	N	P
7440-38-2	Arsenic	8.3		*	P
7440-39-3	Barium	42.5	B		P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	0.29	U		P
7440-70-2	Calcium	94300			P
7440-47-3	Chromium	9.5		*	P
7440-48-4	Cobalt	5.1	B		P
7440-50-8	Copper	9.1			P
7439-89-6	Iron	13100			P
7439-92-1	Lead	10.6			P
7439-95-4	Magnesium	54300			P
7439-96-5	Manganese	349			P
7439-97-6	Mercury	0.07	U		CV
7440-02-0	Nickel	9.7	B		P
7440-09-7	Potassium	1500			P
7782-49-2	Selenium	1.1	U	N	P
7440-22-4	Silver	0.88	U		P
7440-23-5	Sodium	182	B		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	13.0	B		P
7440-66-6	Zinc	39.9			P
	Cyanide	0.32	U	N	CA

Color Before: GRAY

Clarity Before:

Texture: FINE

Color After: GRAY

Clarity After:

Artifacts:

Comments:



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CENTRAL REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Date: AUG 19 1996

RECEIVED

AUG 21 1996

IEPA/DLPC

Subject: Review of Region 5 Data for BANNER WESTERN

From: Charles T. Elly, Director
Region 5 Central Regional Laboratory

Chuck T. Elly

To: IEPA

Attached are the results for: BANNER WESTERN

CRL request number: 960123

Analyzed for: VOA (Organic)

Results are reported for sample designations: 96IE26R01, R02, S01, S03 and D01
(five samples)

Results Status:

- (X) Acceptable for Use .
() Data Qualified but acceptable for use
() Data Unacceptable for Use.

(X) Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer:

- Samples 96IE26S01 and 96IE26D01 each contained chloroethane at high concentration. High concentration of this compound is a health hazard. Please see narrative for QC and case description.

Comments by Laboratory Director or Quality Control Coordinator

Review Record for **BANNER WESTERN 960123 VOA**

Maria Fuentes
08/13/96

Peer and Task Monitor Date Reviewed Unreviewed

Chris Young 8/16/96

Organic Team Leader and Date Reviewed Unreviewed

Chuck Ely 8/16/96

QC Coordinator(VACANT) and Date Reviewed Unreviewed

Sylvia Griffin AUG 19 1996

Data Management Coordinator and Date Received

Date Transmitted AUG 19 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date
Comments:

CASE NARRATIVE

DATE: August 6, 1996

PROJECT NAME: Banner Western Samples - CRL Case # 960123
Analysis of Volatile Organic Analytes (VOA)

ANALYST: Anthony Gugliotta, Lockheed/ESAT *ag*

REVIEWERS: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader *ZR*
Dennis Miller, Lockheed/ESAT Team Manager *DM*
Nidia Fuentes, EPA CRL Task Monitor *NF*

I. CASE DESCRIPTION:

The laboratory received five preserved water samples from the Banner Western site (96IE26R01, R02, S01, S03 and D01) on 7/11/96 for volatile organic analyte (VOA) analysis. All samples were analyzed by CRL Method 624VOA (revised 12/15/95) using GC/MS#7 on 7/12/96 and 7/17/96. All site samples were analyzed within the sample holding time requirements. The QC criterion for sample holding times is 14 days for acid-preserved water samples. These samples were received at the laboratory in good condition. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. Instrument Performance Checks (IPC): On 7/10/96, 7/12/96 and 7/17/96, a GC/MS IPC using p-BFB was made on GC/MS#7 to determine if acceptable EPA tuning criteria were met. The QC criteria are the same as those found in the Statement of Work under the EPA's Contract Laboratory Program. All criteria were met, no problems were observed.

2. Initial Calibrations (IC): An acceptable five-point IC is required for all target compounds before samples can be analyzed. The QC criterion for the IC states that each analyte's %RSD must be ≤30%.

The initial calibration was generated on GC/MS#7 on 7/10/96. All QC criteria were acceptable for all target compounds in the initial calibration. No problems were observed with the initial calibration.

3. Continuing Calibrations (CC): Two continuing calibrations were required for this case (file >B2485 on 7/12/96 and file >B2506 on 7/17/96). All QC criteria were acceptable for all target compounds in each continuing calibration. No problems were observed.

4. Internal Standard (IS) Area and Retention Time (RT) Summary: The QC criterion states that the areas of ISs must be within a factor of two of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas and retention times met the QC requirements on all samples analyzed on GC/MS#7. No problems were observed.

III. METHOD QUALITY CONTROL:

1. Method Blank Results: Lab Blanks (reagent water spiked with internal standards and surrogates) were analyzed to check the GC/MS, purge and trap systems and reagents for laboratory contamination (see Form I VOA). All QC data for the Lab Blanks were acceptable.

In the Lab Blanks analyzed on 7/12/96 and 7/17/96, no analytes and no TICs were detected. No problems were observed.

2. Surrogate Spike Compound Results: The surrogate spike compound recovery data were within the QC limits for all water samples on GC/MS#7. No problems were observed. (See Form II VOA-1).

3. Laboratory Control Sample (LCS): The laboratory generated acceptable results for the LCS. See Form XI VOA. All compounds had recoveries within the range of 60% to 140%.

4. Performance Evaluation Sample (PES): The laboratory analyzed a Performance Evaluation Sample (960013S01) for July 1996. The QC criteria for the PES are the control limits established by EMSL-LV. The results were submitted to the EPA WAM for scoring. For the July 1996 PES, all reported target compound values were within acceptable limits.

IV. SAMPLE RESULTS:

Samples 96IE26S01 and 96IE26D01 each contained chloroethane at a concentration which exceeded the calibration range. Each of these samples was diluted by a factor of 10 and reanalyzed. The results of the reanalyses are acceptable. A Form 1 Summary was created for each of these samples.

The laboratory met the qualitative and quantitative analysis requirements for TCLs and TICs.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: BANNER WESTERN

Contract:CRL

LAB BLANK

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: LAB BLANK

Sample wt/vol: 25 (g/mL) mL

Lab File ID: >B2487

Level: (low/med) LOW

Date Received: 07/12/96

% Moisture: not dec.100

Date Analyzed: 7/12/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
74-87-3-----	Chloromethane		1.	U
75-01-4-----	Vinyl chloride		1.	U
74-83-9-----	Bromomethane		1.	U
75-00-3-----	Chloroethane		1.	U
75-35-4-----	1,1-Dichloroethene		1.	U
67-64-1-----	Acetone		3.	U
75-15-0-----	Carbon disulfide		1.	U
75-09-2-----	Methylene chloride		1.	U
156-60-5-----	trans-1,2-Dichloroethene		1.	U
75-34-3-----	1,1-Dichloroethane		1.	U
594-20-7-----	2,2-Dichloropropane		1.	U
156-59-2-----	cis-1,2-Dichloroethene		1.	U
78-93-3-----	2-Butanone		3.	U
74-97-5-----	Bromochloromethane		1.	U
67-66-3-----	Chloroform		1.	U
71-55-6-----	1,1,1-trichloroethane		1.	U
56-23-5-----	Carbon tetrachloride		1.	U
563-58-6-----	1,1-Dichloropropene		1.	U
71-43-2-----	Benzene		1.	U
107-06-2-----	1,2-Dichloroethane		1.	U
79-01-6-----	Trichloroethene		1.	U
78-87-5-----	1,2-Dichloropropane		1.	U
74-95-3-----	Dibromomethane		1.	U
75-27-4-----	Bromodichloromethane		1.	U
10061-01-5-----	cis-1,3-dichloropropene		1.	U
108-88-3-----	Toluene		1.	U
108-10-1-----	4-Methyl-2-pentanone		2.	U
10061-02-6-----	trans-1,3-Dichloropropene		1.	U
127-18-4-----	Tetrachloroethene		1.	U
79-00-5-----	1,1,2-Trichloroethane		1.	U
142-28-9-----	1,3-Dichloropropane		1.	U
591-78-6-----	2-Hexanone		2.	U
124-48-1-----	Dibromochloromethane		1.	U
106-93-4-----	1,2-Dibromoethane		1.	U
108-90-7-----	Chlorobenzene		1.	U
630-20-6-----	1,1,1,2-Tetrachloroethane		1.	U
100-41-4-----	Ethylbenzene		1.	U

Are there any TICs? (Please check a box)

YES NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Site Name: BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: LAB BLANK

Sample wt/vol: 25 (g/mL) mL

Lab File ID: >B2487

Level: (low/med) LOW

Date Received: 07/12/96

% Moisture: not dec.100

Date Analyzed: 7/12/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
1083836423-----	m &/or p-Xylene		1.	U
95-47-6-----	o-Xylene		1.	U
100-42-5-----	Styrene		1.	U
75-25-2-----	Bromoform		1.	U
98-82-8-----	Isopropylbenzene		1.	U
108-86-1-----	Bromobenzene		1.	U
96-18-4-----	1,2,3-Trichloropropane		1.	U
79-34-5-----	1,1,2,2-Tetrachloroethane		1.	U
103-65-1-----	n-Propylbenzene		1.	U
95-49-8-----	2-Chlorotoluene		1.	U
106-43-4-----	4-Chlorotoluene		1.	U
108-67-8-----	1,3,5-Trimethylbenzene		1.	U
98-06-6-----	tert-Butylbenzene		1.	U
95-63-6-----	1,2,4-Trimethylbenzene		1.	U
135-98-8-----	sec-Butylbenzene		1.	U
541-73-1-----	1,3-Dichlorobenzene		1.	U
106-46-7-----	1,4-Dichlorobenzene		1.	U
99-87-6-----	p-Isopropyltoluene		1.	U
95-50-1-----	1,2-Dichlorobenzene		1.	U
104-51-8-----	n-Butylbenzene		1.	U
96-12-8-----	1,2-Dibromo-3-chloropropane		1.	U
120-82-1-----	1,2,4-Trichlorobenzene		1.	U
91-20-3-----	Naphthalene		1.	U
87-68-3-----	Hexachlorobutadiene		1.	U
87-61-6-----	1,2,3-Trichlorobenzene		1.	U

FORM I-2 VOA

1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name:BANNER WESTERN

Contract:CRL

 LAB BLANK

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: LAB BLANK

Sample wt/vol: 25 (g/mL) mL

Lab File ID: >B2508

Level: (low/med) LOW

Date Received: 07/17/96

% Moisture: not dec.100

Date Analyzed: 7/17/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
74-87-3-----	Chloromethane	1.	U	
75-01-4-----	Vinyl chloride	1.	U	
74-83-9-----	Bromomethane	1.	U	
75-00-3-----	Chloroethane	1.	U	
75-35-4-----	1,1-Dichloroethene	1.	U	
67-64-1-----	Acetone	3.	U	
75-15-0-----	Carbon disulfide	1.	U	
75-09-2-----	Methylene chloride	1.	U	
156-60-5-----	trans-1,2-Dichloroethene	1.	U	
75-34-3-----	1,1-Dichloroethane	1.	U	
594-20-7-----	2,2-Dichloropropane	1.	U	
156-59-2-----	cis-1,2-Dichloroethene	1.	U	
78-93-3-----	2-Butanone	3.	U	
74-97-5-----	Bromochloromethane	1.	U	
67-66-3-----	Chloroform	1.	U	
71-55-6-----	1,1,1-trichloroethane	1.	U	
56-23-5-----	Carbon tetrachloride	1.	U	
563-58-6-----	1,1-Dichloropropene	1.	U	
71-43-2-----	Benzene	1.	U	
107-06-2-----	1,2-Dichloroethane	1.	U	
79-01-6-----	Trichloroethene	1.	U	
78-87-5-----	1,2-Dichloropropane	1.	U	
74-95-3-----	Dibromomethane	1.	U	
75-27-4-----	Bromodichloromethane	1.	U	
10061-01-5-----	cis-1,3-dichloropropene	1.	U	
108-88-3-----	Toluene	1.	U	
108-10-1-----	4-Methyl-2-pentanone	2.	U	
10061-02-6-----	trans-1,3-Dichloropropene	1.	U	
127-18-4-----	Tetrachloroethene	1.	U	
79-00-5-----	1,1,2-Trichloroethane	1.	U	
142-28-9-----	1,3-Dichloropropane	1.	U	
591-78-6-----	2-Hexanone	2.	U	
124-48-1-----	Dibromochloromethane	1.	U	
106-93-4-----	1,2-Dibromoethane	1.	U	
108-90-7-----	Chlorobenzene	1.	U	
630-20-6-----	1,1,1,2-Tetrachloroethane	1.	U	
100-41-4-----	Ethylbenzene	1.	U	

74-87-3-----	Chloromethane	1.	U
75-01-4-----	Vinyl chloride	1.	U
74-83-9-----	Bromomethane	1.	U
75-00-3-----	Chloroethane	1.	U
75-35-4-----	1,1-Dichloroethene	1.	U
67-64-1-----	Acetone	3.	U
75-15-0-----	Carbon disulfide	1.	U
75-09-2-----	Methylene chloride	1.	U
156-60-5-----	trans-1,2-Dichloroethene	1.	U
75-34-3-----	1,1-Dichloroethane	1.	U
594-20-7-----	2,2-Dichloropropane	1.	U
156-59-2-----	cis-1,2-Dichloroethene	1.	U
78-93-3-----	2-Butanone	3.	U
74-97-5-----	Bromochloromethane	1.	U
67-66-3-----	Chloroform	1.	U
71-55-6-----	1,1,1-trichloroethane	1.	U
56-23-5-----	Carbon tetrachloride	1.	U
563-58-6-----	1,1-Dichloropropene	1.	U
71-43-2-----	Benzene	1.	U
107-06-2-----	1,2-Dichloroethane	1.	U
79-01-6-----	Trichloroethene	1.	U
78-87-5-----	1,2-Dichloropropane	1.	U
74-95-3-----	Dibromomethane	1.	U
75-27-4-----	Bromodichloromethane	1.	U
10061-01-5-----	cis-1,3-dichloropropene	1.	U
108-88-3-----	Toluene	1.	U
108-10-1-----	4-Methyl-2-pentanone	2.	U
10061-02-6-----	trans-1,3-Dichloropropene	1.	U
127-18-4-----	Tetrachloroethene	1.	U
79-00-5-----	1,1,2-Trichloroethane	1.	U
142-28-9-----	1,3-Dichloropropane	1.	U
591-78-6-----	2-Hexanone	2.	U
124-48-1-----	Dibromochloromethane	1.	U
106-93-4-----	1,2-Dibromoethane	1.	U
108-90-7-----	Chlorobenzene	1.	U
630-20-6-----	1,1,1,2-Tetrachloroethane	1.	U
100-41-4-----	Ethylbenzene	1.	U

Are there any TICs ? (Please check a box)

YES NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

LAB BLANK

Site Name:BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2508

Level: (low/med) LOW Date Received: 07/17/96

% Moisture: not dec.100 Date Analyzed: 7/17/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
1083836423-----	m &/or p-Xylene	1.	U	
95-47-6-----	o-Xylene	1.	U	
100-42-5-----	Styrene	1.	U	
75-25-2-----	Bromoform	1.	U	
98-82-8-----	Isopropylbenzene	1.	U	
108-86-1-----	Bromobenzene	1.	U	
96-18-4-----	1,2,3-Trichloropropane	1.	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	1.	U	
103-65-1-----	n-Propylbenzene	1.	U	
95-49-8-----	2-Chlorotoluene	1.	U	
106-43-4-----	4-Chlorotoluene	1.	U	
108-67-8-----	1,3,5-Trimethylbenzene	1.	U	
98-06-6-----	tert-Butylbenzene	1.	U	
95-63-6-----	1,2,4-Trimethylbenzene	1.	U	
135-98-8-----	sec-Butylbenzene	1.	U	
541-73-1-----	1,3-Dichlorobenzene	1.	U	
106-46-7-----	1,4-Dichlorobenzene	1.	U	
99-87-6-----	p-Isopropyltoluene	1.	U	
95-50-1-----	1,2-Dichlorobenzene	1.	U	
104-51-8-----	n-Butylbenzene	1.	U	
96-12-8-----	1,2-Dibromo-3-chloropropane	1.	U	
120-82-1-----	1,2,4-Trichlorobenzene	1.	U	
91-20-3-----	Naphthalene	1.	U	
87-68-3-----	Hexachlorobutadiene	1.	U	
87-61-6-----	1,2,3-Trichlorobenzene	1.	U	

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name:BANNER WESTERN

Contract:CRL

96IE26R01

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R01

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2489

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
74-87-3-----	Chloromethane	1.	U	
75-01-4-----	Vinyl chloride	1.	U	
74-83-9-----	Bromomethane	1.	U	
75-00-3-----	Chloroethane	1.	U	
75-35-4-----	1,1-Dichloroethene	1.	U	
67-64-1-----	Acetone	85.		
75-15-0-----	Carbon disulfide	1.	U	
75-09-2-----	Methylene chloride	1.	U	
156-60-5-----	trans-1,2-Dichloroethene	1.	U	
75-34-3-----	1,1-Dichloroethane	1.	U	
594-20-7-----	2,2-Dichloropropane	1.	U	
156-59-2-----	cis-1,2-Dichloroethene	1.	U	
78-93-3-----	2-Butanone	3.	U	
74-97-5-----	Bromochloromethane	1.	U	
67-66-3-----	Chloroform	1.	U	
71-55-6-----	1,1,1-trichloroethane	1.	U	
56-23-5-----	Carbon tetrachloride	1.	U	
563-58-6-----	1,1-Dichloropropene	1.	U	
71-43-2-----	Benzene	1.	U	
107-06-2-----	1,2-Dichloroethane	1.	U	
79-01-6-----	Trichloroethene	1.	U	
78-87-5-----	1,2-Dichloropropane	1.	U	
74-95-3-----	Dibromomethane	1.	U	
75-27-4-----	Bromodichloromethane	1.	U	
10061-01-5-----	cis-1,3-dichloropropene	1.	U	
108-88-3-----	Toluene	.6	J	
108-10-1-----	4-Methyl-2-pentanone	2.	U	
10061-02-6-----	trans-1,3-Dichloropropene	1.	U	
127-18-4-----	Tetrachloroethene	1.	U	
79-00-5-----	1,1,2-Trichloroethane	1.	U	
142-28-9-----	1,3-Dichloropropane	1.	U	
591-78-6-----	2-Hexanone	2.	U	
124-48-1-----	Dibromochloromethane	1.	U	
106-93-4-----	1,2-Dibromoethane	1.	U	
108-90-7-----	Chlorobenzene	1.	U	
630-20-6-----	1,1,1,2-Tetrachloroethane	1.	U	
100-41-4-----	Ethylbenzene	1.	U	

Are there any TICs ? (Please check a box)

YES NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: BANNER WESTERN

Contract:CRL

96IE26R01

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R01

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2489

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
1083836423-----	m &/or p-Xylene	1.	U	
95-47-6-----	o-Xylene	1.	U	
100-42-5-----	Styrene	1.	U	
75-25-2-----	Bromoform	1.	U	
98-82-8-----	Isopropylbenzene	1.	U	
108-86-1-----	Bromobenzene	1.	U	
96-18-4-----	1,2,3-Trichloropropane	1.	U	
79-34-5-----	1,1,2,2-Tetrachloroethane	1.	U	
103-65-1-----	n-Propylbenzene	1.	U	
95-49-8-----	2-Chlorotoluene	1.	U	
106-43-4-----	4-Chlorotoluene	1.	U	
108-67-8-----	1,3,5-Trimethylbenzene	1.	U	
98-06-6-----	tert-Butylbenzene	1.	U	
95-63-6-----	1,2,4-Trimethylbenzene	1.	U	
135-98-8-----	sec-Butylbenzene	1.	U	
541-73-1-----	1,3-Dichlorobenzene	1.	U	
106-46-7-----	1,4-Dichlorobenzene	1.	U	
99-87-6-----	p-Isopropyltoluene	1.	U	
95-50-1-----	1,2-Dichlorobenzene	1.	U	
104-51-8-----	n-Butylbenzene	1.	U	
96-12-8-----	1,2-Dibromo-3-chloropropane	1.	U	
120-82-1-----	1,2,4-Trichlorobenzene	1.	U	
91-20-3-----	Naphthalene	1.	U	
87-68-3-----	Hexachlorobutadiene	1.	U	
87-61-6-----	1,2,3-Trichlorobenzene	1.	U	

FORM I-2 VOA

1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: BANNER WESTERN

Contract:CRL

96IE26R02

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R02

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2490

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
---------	----------	-----------------	------	---

74-87-3-----	Chloromethane		1.	U
75-01-4-----	Vinyl chloride		1.	U
74-83-9-----	Bromomethane		1.	U
75-00-3-----	Chloroethane		1.	U
75-35-4-----	1,1-Dichloroethene		1.	U
67-64-1-----	Acetone		3.	U
75-15-0-----	Carbon disulfide		1.	U
75-09-2-----	Methylene chloride		1.	U
156-60-5-----	trans-1,2-Dichloroethene		1.	U
75-34-3-----	1,1-Dichloroethane		1.	U
594-20-7-----	2,2-Dichloropropane		1.	U
156-59-2-----	cis-1,2-Dichloroethene		1.	U
78-93-3-----	2-Butanone		3.	U
74-97-5-----	Bromochloromethane		1.	U
67-66-3-----	Chloroform		1.	U
71-55-6-----	1,1,1-trichloroethane		1.	U
56-23-5-----	Carbon tetrachloride		1.	U
563-58-6-----	1,1-Dichloropropene		1.	U
71-43-2-----	Benzene		1.	U
107-06-2-----	1,2-Dichloroethane		1.	U
79-01-6-----	Trichloroethene		1.	U
78-87-5-----	1,2-Dichloropropane		1.	U
74-95-3-----	Dibromomethane		1.	U
75-27-4-----	Bromodichloromethane		1.	U
10061-01-5-----	cis-1,3-dichloropropene		1.	U
108-88-3-----	Toluene		1.	U
108-10-1-----	4-Methyl-2-pentanone		2.	U
10061-02-6-----	trans-1,3-Dichloropropene		1.	U
127-18-4-----	Tetrachloroethene		1.	U
79-00-5-----	1,1,2-Trichloroethane		1.	U
142-28-9-----	1,3-Dichloropropane		1.	U
591-78-6-----	2-Hexanone		2.	U
124-48-1-----	Dibromochloromethane		1.	U
106-93-4-----	1,2-Dibromoethane		1.	U
108-90-7-----	Chlorobenzene		1.	U
630-20-6-----	1,1,1,2-Tetrachloroethane		1.	U
100-41-4-----	Ethylbenzene		1.	U

Are there any TICs? (Please check a box)

YES NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name:BANNER WESTERN

Contract:CRL

96IE26R02

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R02

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2490

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
1083836423-----	m &/or p-Xylene			
95-47-6-----	o-Xylene			
100-42-5-----	Styrene			
75-25-2-----	Bromoform			
98-82-8-----	Isopropylbenzene			
108-86-1-----	Bromobenzene			
96-18-4-----	1,2,3-Trichloropropane			
79-34-5-----	1,1,2,2-Tetrachloroethane			
103-65-1-----	n-Propylbenzene			
95-49-8-----	2-Chlorotoluene			
106-43-4-----	4-Chlorotoluene			
108-67-8-----	1,3,5-Trimethylbenzene			
98-06-6-----	tert-Butylbenzene			
95-63-6-----	1,2,4-Trimethylbenzene			
135-98-8-----	sec-Butylbenzene			
541-73-1-----	1,3-Dichlorobenzene			
106-46-7-----	1,4-Dichlorobenzene			
99-87-6-----	p-Isopropyltoluene			
95-50-1-----	1,2-Dichlorobenzene			
104-51-8-----	n-Butylbenzene			
96-12-8-----	1,2-Dibromo-3-chloropropane			
120-82-1-----	1,2,4-Trichlorobenzene			
91-20-3-----	Naphthalene			
87-68-3-----	Hexachlorobutadiene			
87-61-6-----	1,2,3-Trichlorobenzene			

FORM I-2 VOA

1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26R02

Site Name: BANNER WESTERN

Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R02

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2490

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.----- Date Analyzed: 7/12/96

Column: CAP Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 75070	Acetaldehyde	6.13	2.	J
2.				
3.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY 96IE26S01

Site Name: BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S01

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2491

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
---------	----------	-----------------	------	---

74-87-3-----	Chloromethane	1.	U
75-01-4-----	Vinyl chloride	1.	U
74-83-9-----	Bromomethane	1.	U
75-00-3-----	Chloroethane	130.	D
75-35-4-----	1,1-Dichloroethene	1.	U
67-64-1-----	Acetone	3.	U
75-15-0-----	Carbon disulfide	1.	U
75-09-2-----	Methylene chloride	1.	U
156-60-5-----	trans-1,2-Dichloroethene	1.	U
75-34-3-----	1,1-Dichloroethane	1.	U
594-20-7-----	2,2-Dichloropropane	1.	U
156-59-2-----	cis-1,2-Dichloroethene	1.	U
78-93-3-----	2-Butanone	3.	U
74-97-5-----	Bromochloromethane	1.	U
67-66-3-----	Chloroform	1.	U
71-55-6-----	1,1,1-trichloroethane	1.	U
56-23-5-----	Carbon tetrachloride	1.	U
563-58-6-----	1,1-Dichloropropene	1.	U
71-43-2-----	Benzene	1.	U
107-06-2-----	1,2-Dichloroethane	1.	U
79-01-6-----	Trichloroethene	1.	U
78-87-5-----	1,2-Dichloropropane	1.	U
74-95-3-----	Dibromomethane	1.	U
75-27-4-----	Bromodichloromethane	1.	U
10061-01-5-----	cis-1,3-dichloropropene	1.	U
108-88-3-----	Toluene	1.	U
108-10-1-----	4-Methyl-2-pentanone	2.	U
10061-02-6-----	trans-1,3-Dichloropropene	1.	U
127-18-4-----	Tetrachloroethene	1.	U
79-00-5-----	1,1,2-Trichloroethane	1.	U
142-28-9-----	1,3-Dichloropropane	1.	U
591-78-6-----	2-Hexanone	2.	U
124-48-1-----	Dibromochloromethane	1.	U
106-93-4-----	1,2-Dibromoethane	1.	U
108-90-7-----	Chlorobenzene	1.	U
630-20-6-----	1,1,1,2-Tetrachloroethane	1.	U
100-41-4-----	Ethylbenzene	1.	U

Are there any TICs? (Please check a box)

YES NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY 96IE26S01

Site Name: BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: 96IE26S01

Sample wt/vol: 25 (g/mL) mL

Lab File ID: >B2491

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: not dec.100

Date Analyzed: 7/12/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
---------	----------	-----------------	------	---

1083836423-----	m &/or p-Xylene		1.	U
95-47-6-----	o-Xylene		1.	U
100-42-5-----	Styrene		1.	U
75-25-2-----	Bromoform		1.	U
98-82-8-----	Isopropylbenzene		1.	U
108-86-1-----	Bromobenzene		1.	U
96-18-4-----	1,2,3-Trichloropropane		1.	U
79-34-5-----	1,1,2,2-Tetrachloroethane		1.	U
103-65-1-----	n-Propylbenzene		1.	U
95-49-8-----	2-Chlorotoluene		1.	U
106-43-4-----	4-Chlorotoluene		1.	U
108-67-8-----	1,3,5-Trimethylbenzene		1.	U
98-06-6-----	tert-Butylbenzene		1.	U
95-63-6-----	1,2,4-Trimethylbenzene		1.	U
135-98-8-----	sec-Butylbenzene		1.	U
541-73-1-----	1,3-Dichlorobenzene		1.	U
106-46-7-----	1,4-Dichlorobenzene		1.	U
99-87-6-----	p-Isopropyltoluene		1.	U
95-50-1-----	1,2-Dichlorobenzene		1.	U
104-51-8-----	n-Butylbenzene		1.	U
96-12-8-----	1,2-Dibromo-3-chloropropane		1.	U
120-82-1-----	1,2,4-Trichlorobenzene		1.	U
91-20-3-----	Naphthalene		1.	U
87-68-3-----	Hexachlorobutadiene		1.	U
87-61-6-----	1,2,3-Trichlorobenzene		1.	U

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26S01

Site Name: BANNER WESTERN Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S01

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2491

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.----- Date Analyzed: 7/12/96

Column: CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 593704	Chlorofluoromethane	5.93	2.	J
2. 420564	Fluorotrimethylsilane	6.21	3.	J
3.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

Site Name: BANNER WESTERN

Contract:CRL

SUMMARY
96IE26D01

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26D01

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2492

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
74-87-3	Chloromethane	1.	U	
75-01-4	Vinyl chloride	1.	U	
74-83-9	Bromomethane	1.	U	
75-00-3	Chloroethane	110.	D	
75-35-4	1,1-Dichloroethene	1.	U	
67-64-1	Acetone	3.	U	
75-15-0	Carbon disulfide	1.	U	
75-09-2	Methylene chloride	1.	U	
156-60-5	trans-1,2-Dichloroethene	1.	U	
75-34-3	1,1-Dichloroethane	1.	U	
594-20-7	2,2-Dichloropropane	1.	U	
156-59-2	cis-1,2-Dichloroethene	1.	U	
78-93-3	2-Butanone	3.	U	
74-97-5	Bromochloromethane	1.	U	
67-66-3	Chloroform	1.	U	
71-55-6	1,1,1-trichloroethane	1.	U	
56-23-5	Carbon tetrachloride	1.	U	
563-58-6	1,1-Dichloropropene	1.	U	
71-43-2	Benzene	1.	U	
107-06-2	1,2-Dichloroethane	1.	U	
79-01-6	Trichloroethene	1.	U	
78-87-5	1,2-Dichloropropane	1.	U	
74-95-3	Dibromomethane	1.	U	
75-27-4	Bromodichloromethane	1.	U	
10061-01-5	cis-1,3-dichloropropene	1.	U	
108-88-3	Toluene	1.	U	
108-10-1	4-Methyl-2-pentanone	2.	U	
10061-02-6	trans-1,3-Dichloropropene	1.	U	
127-18-4	Tetrachloroethene	1.	U	
79-00-5	1,1,2-Trichloroethane	1.	U	
142-28-9	1,3-Dichloropropane	1.	U	
591-78-6	2-Hexanone	2.	U	
124-48-1	Dibromochloromethane	1.	U	
106-93-4	1,2-Dibromoethane	1.	U	
108-90-7	Chlorobenzene	1.	U	
630-20-6	1,1,1,2-Tetrachloroethane	1.	U	
100-41-4	Ethylbenzene	1.	U	

74-87-3	Chloromethane	1.	U
75-01-4	Vinyl chloride	1.	U
74-83-9	Bromomethane	1.	U
75-00-3	Chloroethane	110.	D
75-35-4	1,1-Dichloroethene	1.	U
67-64-1	Acetone	3.	U
75-15-0	Carbon disulfide	1.	U
75-09-2	Methylene chloride	1.	U
156-60-5	trans-1,2-Dichloroethene	1.	U
75-34-3	1,1-Dichloroethane	1.	U
594-20-7	2,2-Dichloropropane	1.	U
156-59-2	cis-1,2-Dichloroethene	1.	U
78-93-3	2-Butanone	3.	U
74-97-5	Bromochloromethane	1.	U
67-66-3	Chloroform	1.	U
71-55-6	1,1,1-trichloroethane	1.	U
56-23-5	Carbon tetrachloride	1.	U
563-58-6	1,1-Dichloropropene	1.	U
71-43-2	Benzene	1.	U
107-06-2	1,2-Dichloroethane	1.	U
79-01-6	Trichloroethene	1.	U
78-87-5	1,2-Dichloropropane	1.	U
74-95-3	Dibromomethane	1.	U
75-27-4	Bromodichloromethane	1.	U
10061-01-5	cis-1,3-dichloropropene	1.	U
108-88-3	Toluene	1.	U
108-10-1	4-Methyl-2-pentanone	2.	U
10061-02-6	trans-1,3-Dichloropropene	1.	U
127-18-4	Tetrachloroethene	1.	U
79-00-5	1,1,2-Trichloroethane	1.	U
142-28-9	1,3-Dichloropropane	1.	U
591-78-6	2-Hexanone	2.	U
124-48-1	Dibromochloromethane	1.	U
106-93-4	1,2-Dibromoethane	1.	U
108-90-7	Chlorobenzene	1.	U
630-20-6	1,1,1,2-Tetrachloroethane	1.	U
100-41-4	Ethylbenzene	1.	U

Are there any TICs? (Please check a box) YES NO

VOLATILE ORGANICS ANALYSIS DATA SHEET

SUMMARY 96IE26D01

Site Name: BANNER WESTERN Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26D01

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2492

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
---------	----------	-----------------	------	---

1083836423-----	m &/or p-Xylene	1.	U
95-47-6-----	o-Xylene	1.	U
100-42-5-----	Styrene	1.	U
75-25-2-----	Bromoform	1.	U
98-82-8-----	Isopropylbenzene	1.	U
108-86-1-----	Bromobenzene	1.	U
96-18-4-----	1,2,3-Trichloropropane	1.	U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.	U
103-65-1-----	n-Propylbenzene	1.	U
95-49-8-----	2-Chlorotoluene	1.	U
106-43-4-----	4-Chlorotoluene	1.	U
108-67-8-----	1,3,5-Trimethylbenzene	1.	U
98-06-6-----	tert-Butylbenzene	1.	U
95-63-6-----	1,2,4-Trimethylbenzene	1.	U
135-98-8-----	sec-Butylbenzene	1.	U
541-73-1-----	1,3-Dichlorobenzene	1.	U
106-46-7-----	1,4-Dichlorobenzene	1.	U
99-87-6-----	p-Isopropyltoluene	1.	U
95-50-1-----	1,2-Dichlorobenzene	1.	U
104-51-8-----	n-Butylbenzene	1.	U
96-12-8-----	1,2-Dibromo-3-chloropropane	1.	U
120-82-1-----	1,2,4-Trichlorobenzene	1.	U
91-20-3-----	Naphthalene	1.	U
87-68-3-----	Hexachlorobutadiene	1.	U
87-61-6-----	1,2,3-Trichlorobenzene	1.	U

FORM I-2 VOA

1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26D01

Site Name: BANNER WESTERN

Contract: ESAT

Lab Code: 5SCR1 Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: 96IE26D01

Sample wt/vol: 25 (g/mL) ML

Lab File ID: >B2492

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: not dec.-----

Date Analyzed: 7/12/96

Column: CAP

Dilution Factor: 1.0

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 593704	Chlorofluoromethane	5.95	2.	J
2.				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE26S03

Site Name: BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S03

Sample wt/vol: 25 (g/mL) mL Lab File ID: >B2493

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.100 Date Analyzed: 7/12/96

Column: (pack/cap) CAP Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
74-87-3-----	Chloromethane	1.	U	
75-01-4-----	Vinyl chloride	1.	U	
74-83-9-----	Bromomethane	1.	U	
75-00-3-----	Chloroethane	1.	U	
75-35-4-----	1,1-Dichloroethene	1.	U	
67-64-1-----	Acetone	3.	U	
75-15-0-----	Carbon disulfide	1.	U	
75-09-2-----	Methylene chloride	1.	U	
156-60-5-----	trans-1,2-Dichloroethene	1.	U	
75-34-3-----	1,1-Dichloroethane	1.	U	
594-20-7-----	2,2-Dichloropropane	1.	U	
156-59-2-----	cis-1,2-Dichloroethene	2.	U	
78-93-3-----	2-Butanone	3.	U	
74-97-5-----	Bromochloromethane	1.	U	
67-66-3-----	Chloroform	1.	U	
71-55-6-----	1,1,1-trichloroethane	1.	U	
56-23-5-----	Carbon tetrachloride	1.	U	
563-58-6-----	1,1-Dichloropropene	1.	U	
71-43-2-----	Benzene	1.	U	
107-06-2-----	1,2-Dichloroethane	1.	U	
79-01-6-----	Trichloroethene	1.	U	
78-87-5-----	1,2-Dichloropropane	1.	U	
74-95-3-----	Dibromomethane	1.	U	
75-27-4-----	Bromodichloromethane	1.	U	
10061-01-5-----	cis-1,3-dichloropropene	1.	U	
108-88-3-----	Toluene	1.	U	
108-10-1-----	4-Methyl-2-pentanone	2.	U	
10061-02-6-----	trans-1,3-Dichloropropene	1.	U	
127-18-4-----	Tetrachloroethene	1.	U	
79-00-5-----	1,1,2-Trichloroethane	1.	U	
142-28-9-----	1,3-Dichloropropane	1.	U	
591-78-6-----	2-Hexanone	2.	U	
124-48-1-----	Dibromochloromethane	1.	U	
106-93-4-----	1,2-Dibromoethane	1.	U	
108-90-7-----	Chlorobenzene	1.	U	
630-20-6-----	1,1,1,2-Tetrachloroethane	1.	U	
100-41-4-----	Ethylbenzene	1.	U	

Are there any TICs ? (Please check a box)

YES | | NO

FORM I VOA

1/89 Rev.

VOLATILE ORGANICS ANALYSIS DATA SHEET

96IE26S03

Site Name: BANNER WESTERN

Contract:CRL

Lab Code: SL-10C Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER

Lab Sample ID: 96IE26S03

Sample wt/vol: 25 (g/mL) mL

Lab File ID: >B2493

Level: (low/med) LOW

Date Received: 07/11/96

% Moisture: not dec.100

Date Analyzed: 7/12/96

Column: (pack/cap) CAP

Dilution Factor: 1.0

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	ug/L	Q
1083836423-----	m &/or p-Xylene	1.		U
95-47-6-----	o-Xylene	1.		U
100-42-5-----	Styrene	1.		U
75-25-2-----	Bromoform	1.		U
98-82-8-----	Isopropylbenzene	1.		U
108-86-1-----	Bromobenzene	1.		U
96-18-4-----	1,2,3-Trichloropropane	1.		U
79-34-5-----	1,1,2,2-Tetrachloroethane	1.		U
103-65-1-----	n-Propylbenzene	1.		U
95-49-8-----	2-Chlorotoluene	1.		U
106-43-4-----	4-Chlorotoluene	1.		U
108-67-8-----	1,3,5-Trimethylbenzene	1.		U
98-06-6-----	tert-Butylbenzene	1.		U
95-63-6-----	1,2,4-Trimethylbenzene	1.		U
135-98-8-----	sec-Butylbenzene	1.		U
541-73-1-----	1,3-Dichlorobenzene	1.		U
106-46-7-----	1,4-Dichlorobenzene	1.		U
99-87-6-----	p-Isopropyltoluene	1.		U
95-50-1-----	1,2-Dichlorobenzene	1.		U
104-51-8-----	n-Butylbenzene	1.		U
96-12-8-----	1,2-Dibromo-3-chloropropane	1.		U
120-82-1-----	1,2,4-Trichlorobenzene	1.		U
91-20-3-----	Naphthalene	1.		U
87-68-3-----	Hexachlorobutadiene	1.		U
87-61-6-----	1,2,3-Trichlorobenzene	1.		U

FORM I-2 VOA

1/89 Rev.

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

^{1E}
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26S03

Site Name: BANNER WESTERN Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S03

Sample wt/vol: 25 (g/mL) ML Lab File ID: >B2493

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec.----- Date Analyzed: 7/12/96

Column: CAP Dilution Factor: 1.0

CONCENTRATION UNITS:
 (ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 76131	1,1,2-Trichloro-1,2,2-trifluoroethane	5.95	2.	J
2.				
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

AUG 06 1996

Date:

Subject: Review of Region 5 Data for BANNER WESTERN

From: Charles T. Elly, Director *Chuck Elly*
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Banner Western

CRL request number: 960123

Analyzed for: ABN (Organics)

Results are reported for sample designations: 96IE26S01, -S03, -D01 and -R01 (Four water samples)

Results Status:

(X) Acceptable for Use except the compound results qualified J and UJ. Please see attached case narrative.

(X) Data Qualified but acceptable for Use for the compounds qualified J and UJ. See the attached case narrative.

() Data Unacceptable for Use.

(X) Sewer Disposal Criteria Met. Exceptions: none

Comments on Data Quality by Reviewer:

- Please see the attached case narrative.

RECEIVED

AUG 08 1996

IEPA/L

Comments by Laboratory Director or Quality Control Coordinator

Review Record for **Banner Western** 960123 **ABN (Organics)**

Bahn Paternoster 08-05/96

Task Monitor Date Reviewed Unreviewed

Bahn Paternoster, for Dr. Tang 08-05/96

Team Leader Date Reviewed Unreviewed

Chuck E. My 8/6/96

QC Coordinator (VACANT) Date Reviewed Unreviewed

Sylvia Griffin AUG 06 1996

Data Management Coordinator and Date Received

Date Transmitted AUG 06 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

960123

TRA301

ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: TOXIC SUBSTANCES

FOR THE TEAM: TOXIC SUBSTANCES
DIVISION/BRANCH SUPERFUND SAMPLE DATE 7/10/96 LAB ARRIVAL DATE 7/11/96 DUE DATE 8/1/96
DI NUMBER TFA DATA SET NUMBER 960123 STUDY BANNER WESTERN PENN CONTRACTOR TEPP

CML LOG NUMBER	SAMPLE DESCRIPTION	WATER VOLATILE ORGANICS SCAN UG/L TOX 17684	WATER ABN ORGANICS SCAN UG/L TOX 17674	SEDIMENTS/SOILS VOLATILE ORGANICS SCAN MG/KG (DRY) TOX 216822	SEDIMENTS/SOILS ABN ORGANICS SCAN MG/KG (DRY) TOX 215722
96 IE-26S01	G101 5-162771-22-23 5-163056-052				
96 IE-26D01	G102 5-16274-25-24				
96 IE-26S03	G103MS 5-162701-715				
96 IE-26R01	G104IE-26R01-700				
96 IE-26R02	MAR BLANK 046				
96 IE-26S01	G101 5-163058				
96 IE-26001	G102 5-162718				
96 IE-26S03	G103MS/MSD 5-162680-671-692				
96 IE-26R01	G204IE-26R01-96				

CASE NARRATIVE

DATE: July 31, 1996

PROJECT NAME: Banner Western Disposal
CRL Case #: 960123 Analysis of Semivolatile Organic
Analytes (SVOA)

ANALYST: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader

REVIEWERS: Ira Wilson, ESAT Organic Supervisor *I.W.*
Dennis Miller, Lockheed/ESAT Team Manager *D.Miller*
Babu Paruchuri, EPA Task Monitor *B.P.*

I. CASE DESCRIPTION:

The laboratory received in good condition four residential well water samples (96IE26S01, D01, -S03, and -R01) on July 11, 1996 for Semivolatile Organic Analytes (SVOA) analysis. The samples were collected on July 10, 1996 and were extracted on July 15, 1996 which is within the holding time requirements for water samples. [QC Criteria for holding time: Seven days from the date of collection]. The sample extracts were analyzed within the holding time requirements. [QC Criteria for sample holding time: Forty days from the date of the extraction]. No problems were observed.

II. INSTRUMENT QUALITY CONTROLS:

1. Instrument Performance Check: Performance checks using decafluorotriphenylphosphine (DFTPP) were made to determine if acceptable EPA tuning criteria were met. The QC criteria are the same as the CLP IFB's criteria. No problems were observed.

2. Initial Calibrations (IC): An acceptable five-point initial calibration (IC) is required for all target compounds before samples can be analyzed. (QC criteria for IC: %RSD must be \leq 30%).

The initial calibration was generated on July 23, 1996 on the HP5996. All of the target compounds %RSDs were acceptable except for benzoic acid (%RSD=39.6) and 2,4-dinitrophenol (%RSD=42.2), therefore, results for benzoic acid and 2,4-dinitrophenol will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). No other problems were observed.

3. Continuing Calibrations (CC): The QC criteria for the continuing calibration are (CC: %D must be \leq 25%).

For the continuing calibration generated on July 23, 1996, all of the target compounds %Ds were acceptable. No problems were observed.

For the continuing calibration generated on July 26, 1996. All of the target compounds %Ds were acceptable except 4-nitrophenol (%D=50.1) and 2,4,6-tribromophenol (%D=28.2), therefore, results for 4-nitrophenol will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). 2,4,6-Tribromophenol is a surrogate, therefore, data qualification is not applicable for it. No other problems were observed.

4. Internal Standard (IS) Area and Retention Time (RT) Summary: The QC criterion states that the IS area of samples must be within 50% of the IS area of the corresponding CC. The RT of the IS for samples must also be within 30 seconds of the RT of the IS for the corresponding CC.

All internal standard areas met the QC requirements; therefore, results are acceptable. No problems were observed. [See Form VIII]

III. METHOD QUALITY CONTROL:

1. Method Blank Results: One Lab Blank (de-ionized water spiked with surrogates) was extracted with this data set to check for contamination.

The Lab Blank contained bis(2-ethylhexyl)phthalate and no TICs. Phthalates are common laboratory contaminants. All positive results for bis(2-ethylhexyl)phthalate are qualified (B) in all of the associated samples. [See Form I SVOA].

2. Surrogate Spike Compound Results: The surrogate spike compound recovery data are within the QC limits. No problems were observed. [See Form II]

3. Laboratory Control Sample (LCS): Laboratory control samples were prepared by spiking deionized water with 750 μ L of the ABN spike standard which contained all of the target analytes except 2,4-dinitrotoluene. The final concentration in the extracted sample was expected to be 75 μ g/L for all target analytes. ESAT was instructed by the Task Monitor to substitute 2,6-dinitrotoluene for 2,4-dinitrotoluene on form 3LCA.

For the LAB SPIKE, all recoveries were within their QC limit except low 4-chloroaniline recovery; therefore, results of 4-chloroaniline will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated

(UJ). No other problems were observed.

For the LAB SPIKE Duplicate, all recoveries were within their QC limit except high benzo(a)pyrene recovery; therefore, results of benzo(a)pyrene will be flagged as estimated (J) for detected compounds while the non-detects will not be flagged. No other problems were observed.

4. Performance Evaluation Sample (PES): ESAT analyzed the July] PES. The QC criteria for the PES are the control limits established by EMSL-LV. All recoveries were within the QC limits except for 4-chloroaniline which was not detected in the PE sample. 4-Chloroaniline recovery was outside the QC criteria for the LAB Spike and Lab spike Duplicate; therefore, results of 4-chloroaniline will be flagged as estimated (J) for detected compounds while all non-detects will be flagged as estimated (UJ). No other problems were observed.

IV. SAMPLE RESULTS

2,4-Dinitrophenol was reported outside the upper calibration range for the lab spike duplicate sample. The lab spike duplicate sample was diluted and reanalyzed (D). The reanalysis result was within the calibration range; therefore, result of 2,4-dinitrophenol will be obtained from the diluted sample. A summary form reflecting reportable values was prepared and submitted in this data package.

The laboratory met the qualitative and quantitative analysis requirements for TCLs and TICs.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1264

Level: (low/med) LOW Date Received: 07/15/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Q	
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	UJ
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	UJ
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	5	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES NO

FORM I SV-1

1/87 Rev

^{1C}
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LAB BLANK

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1264

Level: (low/med) LOW Date Received: 07/15/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Q		
		20	5	U
99-09-2	3-Nitroaniline			
83-32-9	Acenaphthene	20	5	U
51-28-5	2,4-Dinitrophenol	20	20	UJ
100-02-7	4-Nitrophenol	20	20	U
132-64-9	Dibenzofuran	5	5	U
121-14-2	2,4-Dinitrotoluene	5	5	U
84-66-2	Diethylphthalate	5	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	5	U
86-73-7	Fluorene	5	5	U
100-01-6	4-Nitroaniline	20	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	20	U
86-30-6	N-Nitrosodiphenylamine	5	5	U
101-55-3	4-Bromophenyl-phenylether	5	5	U
118-74-1	Hexachlorobenzene	5	5	U
87-86-5	Pentachlorophenol	20	20	U
85-01-8	Phenanthrene	5	5	U
120-12-7	Anthracene	5	5	U
84-74-2	Di-n-butylphthalate	5	5	U
206-44-0	Fluoranthene	5	5	U
129-00-0	Pyrene	5	5	U
85-68-7	Butylbenzylphthalate	5	5	U
91-94-1	3,3'-Dichlorobenzidine	5	5	U
86-74-8	Carbazole	5	5	U
56-55-3	Benzo(a)anthracene	5	5	U
218-01-9	Chrysene	5	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	2		J
117-84-0	Di-n-octylphthalate	5	5	U
205-99-2	Benzo(b)fluoranthene	5	5	U
207-08-9	Benzo(k)fluoranthene	5	5	U
50-32-8	Benzo(a)pyrene	5	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	5	U
53-70-3	Dibenzo(a,h)anthracene	5	5	U
191-24-2	Benzo(g,h,i)perylene	5	5	U

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Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

LAB BLANK

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCR1 Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: LAB BLANK

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >E1264

Level: (low/med) LOW Date Received: 07/15/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 7/23/96

GPC Cleanup: (Y/N) N pH:--- Dilution Factor: 1.00000

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.62	5.	J
2.				
3.				
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26R01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1269

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

Q

CAS NO.	COMPOUND			
108-95-2	Phenol	5	U	
111-44-4	bis(2-Chloroethyl)ether	5	U	
95-57-8	2-Chlorophenol	5	U	
541-73-1	1,3-Dichlorobenzene	5	U	
106-46-7	1,4-Dichlorobenzene	5	U	
100-51-6	Benzyl alcohol	5	U	
95-50-1	1,2-Dichlorobenzene	5	U	
95-48-7	2-Methylphenol	5	U	
108-60-1	bis(2-Chloroisopropyl)ether	5	U	
106-44-5	4-Methylphenol	5	U	
621-64-7	N-Nitroso-di-n-propylamine	5	U	
67-72-1	Hexachloroethane	5	U	
98-95-3	Nitrobenzene	5	U	
78-59-1	Isophorone	5	U	
88-75-5	2-Nitrophenol	5	U	
105-67-9	2,4-Dimethylphenol	5	U	
65-85-0	Benzoic acid	20	UJ	
111-91-1	bis(2-Chloroethoxy)methane	5	U	
120-83-2	2,4-Dichlorophenol	5	U	
120-82-1	1,2,4-Trichlorobenzene	5	U	
91-20-3	Naphthalene	5	U	
106-47-8	4-Chloroaniline	5	UJ	
87-68-3	Hexachlorobutadiene	5	U	
59-50-7	4-Chloro-3-methylphenol	5	U	
91-57-6	2-Methylnaphthalene	5	U	
77-47-4	Hexachlorocyclopentadiene	5	U	
88-06-2	2,4,6-Trichlorophenol	5	U	
95-95-4	2,4,5-Trichlorophenol	20	U	
91-58-7	2-Chloronaphthalene	5	U	
88-74-4	2-Nitroaniline	20	U	
131-11-3	Dimethylphthalate	5	U	
208-96-8	Acenaphthylene	5	U	
606-20-2	2,6-Dinitrotoluene	5	U	

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO []

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26R01

La Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1269

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L		Q
99-09-2	3-Nitroaniline	20	U	
83-32-9	Acenaphthene	5	U	
51-28-5	2,4-Dinitrophenol	20	UJ	
100-02-7	4-Nitrophenol	20	U	
132-64-9	Dibenzofuran	5	U	
121-14-2	2,4-Dinitrotoluene	5	U	
84-66-2	Diethylphthalate	5	U	
7005-72-3	4-Chlorophenyl-phenylether	5	U	
86-73-7	Fluorene	5	U	
100-01-6	4-Nitroaniline	20	U	
534-52-1	4,6-Dinitro-2-methylphenol	20	U	
86-30-6	N-Nitrosodiphenylamine	5	U	
101-55-3	4-Bromophenyl-phenylether	5	U	
118-74-1	Hexachlorobenzene	5	U	
87-86-5	Pentachlorophenol	20	U	
85-01-8	Phenanthrene	5	U	
120-12-7	Anthracene	5	U	
84-74-2	Di-n-butylphthalate	5	U	
206-44-0	Fluoranthene	5	U	
129-00-0	Pyrene	5	U	
85-68-7	Butylbenzylphthalate	5	U	
91-94-1	3,3'-Dichlorobenzidine	5	U	
86-74-8	Carbazole	5	U	
56-55-3	Benzo(a)anthracene	5	U	
218-01-9	Chrysene	5	U	
117-81-7	bis(2-Ethylhexyl)phthalate	3	BJ	
117-84-0	Di-n-octylphthalate	5	U	
205-99-2	Benzo(b)fluoranthene	5	U	
207-08-9	Benzo(k)fluoranthene	5	U	
50-32-8	Benzo(a)pyrene	5	U	
193-39-5	Indeno(1,2,3-cd)pyrene	5	U	
53-70-3	Dibenzo(a,h)anthracene	5	U	
191-24-2	Benzo(g,h,i)perylene	5	U	

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Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26R01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26R01

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >E1269

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 7/23/96

GPC Cleanup: (Y/N) N pH:--- Dilution Factor: 1.00000

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	2.66	7.	BJ
2.	Unknown	5.44	6.	J
3.				
4.				
5.				
6.				
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1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26S01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1267

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CONCENTRATION UNITS:

(ug/L or ug/Kg) ug/L Q

108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	UJ
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	UJ
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	5	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO []

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26S01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1267

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/L	Q
99-09-2	3-Nitroaniline	20	U	
83-32-9	Acenaphthene	5	U	
51-28-5	2,4-Dinitrophenol	20	UJ	
100-02-7	4-Nitrophenol	20	U	
132-64-9	Dibenzofuran	5	U	
121-14-2	2,4-Dinitrotoluene	5	U	
84-66-2	Diethylphthalate	5	U	
7005-72-3	4-Chlorophenyl-phenylether	5	U	
86-73-7	Fluorene	5	U	
100-01-6	4-Nitroaniline	20	U	
534-52-1	4,6-Dinitro-2-methylphenol	20	U	
86-30-6	N-Nitrosodiphenylamine	5	U	
101-55-3	4-Bromophenyl-phenylether	5	U	
118-74-1	Hexachlorobenzene	5	U	
87-86-5	Pentachlorophenol	20	U	
85-01-8	Phenanthrene	5	U	
120-12-7	Anthracene	5	U	
84-74-2	Di-n-butylphthalate	5	U	
206-44-0	Fluoranthene	5	U	
129-00-0	Pyrene	5	U	
85-68-7	Butylbenzylphthalate	5	U	
91-94-1	3,3'-Dichlorobenzidine	5	U	
86-74-8	Carbazole	5	U	
56-55-3	Benzo(a)anthracene	5	U	
218-01-9	Chrysene	5	U	
117-81-7	bis(2-Ethylhexyl)phthalate	5	U	
117-84-0	Di-n-octylphthalate	5	U	
205-99-2	Benzo(b)fluoranthene	5	U	
207-08-9	Benzo(k)fluoranthene	5	U	
50-32-8	Benzo(a)pyrene	5	U	
193-39-5	Indeno(1,2,3-cd)pyrene	5	U	
53-70-3	Dibenzo(a,h)anthracene	5	U	
191-24-2	Benzo(g,h,i)perylene	5	U	

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Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26S01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

La. Code: 5SCR1 Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S01

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >E1267

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 7/23/96

GPC Cleanup: (Y/N) N pH:--- Dilution Factor: 1.00000

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown Sulfur	17.26	7.	J
2. 10544500	Sulfur, mol. (S8) (8CI9CI)	20.56	140.	J
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EPA SAMPLE NO.

96IE26D01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26D01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1268

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	UJ
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	UJ
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	5	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES [X] NO []

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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26D01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26D01

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1268

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/23/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	ug/L	Q
99-09-2	3-Nitroaniline	20	U	
83-32-9	Acenaphthene	5	U	
51-28-5	2,4-Dinitrophenol	20	UJ	
100-02-7	4-Nitrophenol	20	U	
132-64-9	Dibenzofuran	5	U	
121-14-2	2,4-Dinitrotoluene	5	U	
84-66-2	Diethylphthalate	5	U	
7005-72-3	4-Chlorophenyl-phenylether	5	U	
86-73-7	Fluorene	5	U	
100-01-6	4-Nitroaniline	20	U	
534-52-1	4,6-Dinitro-2-methylphenol	20	U	
86-30-6	N-Nitrosodiphenylamine	5	U	
101-55-3	4-Bromophenyl-phenylether	5	U	
118-74-1	Hexachlorobenzene	5	U	
87-86-5	Pentachlorophenol	20	U	
85-01-8	Phenanthrene	5	U	
120-12-7	Anthracene	5	U	
84-74-2	Di-n-butylphthalate	5	U	
206-44-0	Fluoranthene	5	U	
129-00-0	Pyrene	5	U	
85-68-7	Butylbenzylphthalate	5	U	
91-94-1	3,3'-Dichlorobenzidine	5	U	
86-74-8	Carbazole	5	U	
56-55-3	Benzo(a)anthracene	5	U	
218-01-9	Chrysene	5	U	
117-81-7	bis(2-Ethylhexyl)phthalate	5	U	
117-84-0	Di-n-octylphthalate	5	U	
205-99-2	Benzo(b)fluoranthene	5	U	
207-08-9	Benzo(k)fluoranthene	5	U	
50-32-8	Benzo(a)pyrene	5	U	
193-39-5	Indeno(1,2,3-cd)pyrene	5	U	
53-70-3	Dibenzo(a,h)anthracene	5	U	
191-24-2	Benzo(g,h,i)perylene	5	U	

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Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26D01

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26D01

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >E1268

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 7/23/96

GPC Cleanup: (Y/N) N pH:--- Dilution Factor: 1.00000

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Unknown	5.38	5.	J
2.	Unknown Sulfur	17.28	7.	J
3. 10544500	Sulfur, mol. (S8) (8CI9CI)	20.56	120.	J
4.				
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^{1B}
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26S03

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S03

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1270

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/24/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
108-95-2	Phenol	5	U
111-44-4	bis(2-Chloroethyl)ether	5	U
95-57-8	2-Chlorophenol	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U
100-51-6	Benzyl alcohol	5	U
95-50-1	1,2-Dichlorobenzene	5	U
95-48-7	2-Methylphenol	5	U
108-60-1	bis(2-Chloroisopropyl)ether	5	U
106-44-5	4-Methylphenol	5	U
621-64-7	N-Nitroso-di-n-propylamine	5	U
67-72-1	Hexachloroethane	5	U
98-95-3	Nitrobenzene	5	U
78-59-1	Isophorone	5	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	5	U
65-85-0	Benzoic acid	20	UJ
111-91-1	bis(2-Chloroethoxy)methane	5	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	5	U
91-20-3	Naphthalene	5	U
106-47-8	4-Chloroaniline	5	UJ
87-68-3	Hexachlorobutadiene	5	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	5	U
77-47-4	Hexachlorocyclopentadiene	5	U
88-06-2	2,4,6-Trichlorophenol	5	U
95-95-4	2,4,5-Trichlorophenol	20	U
91-58-7	2-Chloronaphthalene	5	U
88-74-4	2-Nitroaniline	20	U
131-11-3	Dimethylphthalate	5	U
208-96-8	Acenaphthylene	5	U
606-20-2	2,6-Dinitrotoluene	5	U

TENTATIVELY IDENTIFIED COMPOUNDS (TICs): YES NO
FORM I SV-1

1/87 Rev

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

96IE26S03

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

Lab Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S03

Sample wt/vol: 1000 (g/ml) mL Lab File ID: >E1270

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 07/24/96

GPC Cleanup: (Y/N) N pH: --- Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS:	
		(ug/L or ug/Kg)	ug/L
99-09-2	3-Nitroaniline	20	U
83-32-9	Acenaphthene	5	U
51-28-5	2,4-Dinitrophenol	20	UJ
100-02-7	4-Nitrophenol	20	U
132-64-9	Dibenzofuran	5	U
121-14-2	2,4-Dinitrotoluene	5	U
84-66-2	Diethylphthalate	5	U
7005-72-3	4-Chlorophenyl-phenylether	5	U
86-73-7	Fluorene	5	U
100-01-6	4-Nitroaniline	20	U
534-52-1	4,6-Dinitro-2-methylphenol	20	U
86-30-6	N-Nitrosodiphenylamine	5	U
101-55-3	4-Bromophenyl-phenylether	5	U
118-74-1	Hexachlorobenzene	5	U
87-86-5	Pentachlorophenol	20	U
85-01-8	Phenanthrene	5	U
120-12-7	Anthracene	5	U
84-74-2	Di-n-butylphthalate	5	U
206-44-0	Fluoranthene	5	U
129-00-0	Pyrene	5	U
85-68-7	Butylbenzylphthalate	5	U
91-94-1	3,3'-Dichlorobenzidine	5	U
86-74-8	Carbazole	5	U
56-55-3	Benzo(a)anthracene	5	U
218-01-9	Chrysene	5	U
117-81-7	bis(2-Ethylhexyl)phthalate	5	U
117-84-0	Di-n-octylphthalate	5	U
205-99-2	Benzo(b)fluoranthene	5	U
207-08-9	Benzo(k)fluoranthene	5	U
50-32-8	Benzo(a)pyrene	5	U
193-39-5	Indeno(1,2,3-cd)pyrene	5	U
53-70-3	Dibenzo(a,h)anthracene	5	U
191-24-2	Benzo(g,h,i)perylene	5	U

FORM I SV-2

1/87 Rev

Data Qualifiers: U = Compounds were analyzed but not detected. The value reported is the method detection limit for reagent water; J = Estimated; D=Diluted Sample; X = Result rejected for failing mass spectral confirmation; E = Concentration exceeded calibration range; B_ = Contaminant found in laboratory method blank.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

96IE26S03

Lab Name: BANNER WESTERN DISPOSAL Contract: ESAT

La. Code: 5SCRL Case No.: 960123 SAS No.: ----- SDG No.: -----

Matrix: (soil/water) WATER Lab Sample ID: 96IE26S03

Sample wt/vol: 1000 (g/mL) mL Lab File ID: >E1270

Level: (low/med) LOW Date Received: 07/11/96

% Moisture: not dec. 100 dec. --- Date Extracted: 07/15/96

Extraction: (Sepf/Cont/Sonc) CONT Date Analyzed: 7/23/96

GPC Cleanup: (Y/N) N pH:--- Dilution Factor: 1.00000

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	Phosphoric acid, triphenyl e	24.27	6.	J
2.	Unknown	32.78	9.	J
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

RECEIVED

AUG 19 1996

Date: AUG 14 1996

IEPA/DLPC

Subject: Review of Region 5 Data for SF 960123 BANNER WESTERN DISPOSAL

From: Charles T. Elly, Director *Chuck Elly*
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for SF 960123 BANNER WESTERN DISPOSAL
CRL request number 960123
for analyses for PCB/PESTICIDES IN WATER
Results are reported for sample designations: 96IE26S01, 96IE26D01, 96IE26S03, 96IE26R01

Results Status:

- Acceptable for Use ;
- Data Qualified, but Acceptable for use
- Data Unacceptable for Use

Sewer Disposal Criteria Met; Exceptions: none

Comments on Data Quality by Reviewer

Instrument performance audits and QC data (Method blank, LCS/LCS DUP recoveries, surrogate recoveries, Florisil cartridge check, PE sample) were generally acceptable. Alpha-BHC was detected in samples 96IE26S01 & D01 at the detection limit. An aroclor pattern closely matching Aroclor 1254 was detected in -S01, -D01 & -S03 at levels below & at the detection limit. See data case narrative for more details.

Data are acceptable for use.

Comments by Laboratory Director or Quality Control Coordinator

Review Record for SF 960123 BANNER WESTERN DISPOSAL

Erlinda Evangelista

Task Monitor/Peer Review and Date

E. Evangelista 8/13/96
(X) Reviewed () Unreviewed

Chi M. Tang

Chi M. Tang 8/13/96

Team Leader and Date

(X) Reviewed () Unreviewed

Vacant

Chuck E. My

8/13/96

QC Coordinator and Date

() Reviewed (X) Unreviewed

Sylvia Griffin AUG 14 1996
Data Management Coordinator and Date Received

Date Transmitted AUG 14 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

960123

TEA3C1

ENVIRONMENTAL PROTECTION AGENCY FOR THE TEAM: PESTICIDES AND PCB'S

DIVISION/BRANCH SUPERFUND SAMPLE DATE 7/16/96 LAB ARRIVAL DATE 7/16/96 DUE DATE 8/1/96
DUN NUMBER TFA DATA SET NUMBER 960123 STUDY Brunor Warren PRIORITY N CONTRACTOR TEPCO

CASE NARRATIVE

DATE: July 22, 1996

PROJECT NAME: Banner Western Disposal/CRL Case #: SF 960123
Analysis of Pesticides/PCBs

ANALYST: Krystyna Minczuk, ESAT Chemist *KM*

REVIEWERS: Ziyad Rajabi, Lockheed/ESAT Organic Group Leader
W.Ira Wilson, Lockheed/ESAT Organic Supervisor
Dennis Miller, Lockheed/ESAT Team Manager *DMiller*
Babu Paruchuri, EPA CRL Work Assignment Manager

I. CASE DESCRIPTION:

The laboratory received four (4) residential well water samples (96IE26R01, 96IE26S01, 96IE26D01, and 96IE26S03) for pesticide/PCB analysis using CRL method 608 Pest/PCB DNS on 07/11/96.

The samples were extracted on 07/15/96 utilizing one-step continuous liquid/liquid extractors per OLC01 methodology and the sample extracts were analyzed on 07/17/96 utilizing the HP5890 GC/EC#5. The samples were extracted within the holding time requirements of seven (7) days after sample collection and the extracts were analyzed within forty (40) days after extraction. No problems were encountered in the extraction or GC/ECD analysis.

II. INSTRUMENT QUALITY CONTROLS:

1. **Instrument Performance Check:** Initial and continuing Endrin and DDT degradation checks for both the primary and confirmatory columns were within CRL QC limits of 15%.

2. **Initial Calibration Check (IC):** An acceptable initial calibration is required before samples can be analyzed. Correlation coefficients generated for Pest A, Pest B and Aroclor 1242 using five points and Aroclor 1254 using four points were 0.995 or greater.

3. **Continuing Calibration Check (CC):** For the primary column, continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242) were within the acceptable %Ds limit of <15% with the exceptions of Heptachlor (17.85%) for the second continuing calibration check.

For the confirmatory column, continuing calibration check standards (Level 3 Pest A, Pest B & Aroclor 1242) were within the acceptable %Ds limit of <15% with the exceptions of Methoxychlor (15.56%) for the second continuing calibration check.

4. **Retention Time (RT) Summary:** The retention time %Ds for each individual compound in the Pest A, Pest B mixes &

Aroclor 1242 ranged between 0.00% to 0.24% on the primary and confirmatory columns.

III. METHOD QUALITY CONTROL:

1. Method Blank Results: A reagent water sample was used for the method blank and was spiked with surrogates, and was extracted and analyzed with the sample batch. No target analytes were detected above the method detection limit.

2. Surrogate Spike Compound Results: The TCMX and DCB surrogate spike recoveries were within the QC limits (50-150%) on both the primary and confirmatory columns for all samples with the exception of DCB in the sample 96IE26R01 (39.30%) on the confirmatory column.

3. Laboratory Control/Laboratory Control Duplicate Sample Results: For both the primary and confirmatory columns, the Laboratory Control Sample (LCS PEST) and the Laboratory Control Sample Duplicate (LCS PEST D) recoveries were acceptable (50-150%) with the exception of Heptachlor in LCS PEST (49.87%) on the confirmatory column. All RPDs were acceptable with the exception of Endosulfan Sulfate (32.13%) on the primary column.

4. Performance Evaluation Samples (PEs): A RES well PE PR561 sample was identified as the PES sample for the month of July 96. All compounds were within the acceptance limits with the exception of alpha-BHC which was action low. However, this compound was quantitated on the primary column with value 0.0177 µg/L and with value 0.0103 µg/L on the confirmatory column. The lower value from the confirmatory column was reported.

5. Florisil Cartridge Check: Florisil Cartridge Check gave acceptable percent recoveries for target analytes (80-120%) on both columns.

IV. SAMPLE RESULTS:

The pesticide a-BHC was detected below the detection limit in sample 96IE26S01 (0.01 µg/L) and slightly above the detection limit in sample 96IE26D01 (0.0113 µg/L). Some of the peaks of the chromatograms closely match the Aroclor 1254 which was quantitated below the detection limit in samples 96IE26S01 (0.15 µg/L) and 96IE26D01 (0.13 µg/L) and slightly above the detection limit in sample 96IE26S03 (0.25 µg/L).

CRL REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
 Sample requestor:
 Facility: Banner Western Disposal
 Matrix: Water
 Date Collected: 10-JUL-96
 Date Extracted: 15-JUL-96

Sample batch ID: 960123
 Account Number: TFA
 Sample ID: 96IE26R01
 Units: µg/L
 Date Received: 11-JUL-96
 Date Analyzed: 17-JUL-96

Method: 608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	U
58899	Lindane	.01	U
76443	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031278	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.2	U
11096825	Aroclor 1260	.2	U

Analyzed by: John W. Wilson /Lockheed/ESAT

Team Leader: John W. Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA	Sample batch ID: 960123
Sample requestor:	Account Number: TFA
Facility: Banner Western Disposal	Sample ID: 96IE26S01
Matrix: Water	Units: $\mu\text{g}/\text{L}$
Date Collected: 10-JUL-96	Date Received: 11-JUL-96
Date Extracted: 15-JUL-96	Date Analyzed: 17-JUL-96

Method: 608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	
58899	Lindane	.01	U
76443	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031278	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.15	
11096825	Aroclor 1260	.2	U

Analyzed by: William /Lockheed/ESAT

Team Leader: W. M. Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter: PEST/PCB

Sample organization: IEPA
 Sample requestor:
 Facility: Banner Western Disposal
 Matrix: Water
 Date Collected: 10-JUL-96
 Date Extracted: 15-JUL-96

Sample batch ID: 960123
 Account Number: TFA
 Sample ID: 96IE26D01
 Units: µg/L
 Date Received: 11-JUL-96
 Date Analyzed: 17-JUL-96

Method: 608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.011	
58899	Lindane	.01	U
76443	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031278	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.13	
11096825	Aroclor 1260	.2	U

Analyzed by: Julie W. /Lockheed/ESAT

Team Leader: Marshall Wilson

CRL REGION V
FINAL RESULTS REPORT
Parameter:PEST/PCB

Sample organization: IEPA
 Sample requestor:
 Facility: Banner Western Disposal
 Matrix: Water
 Date Collected: 10-JUL-96
 Date Extracted: 15-JUL-96

Sample batch ID: 960123
 Account Number: TFA
 Sample ID: 96IE26S03
 Units: $\mu\text{g/L}$
 Date Received: 11-JUL-96
 Date Analyzed: 17-JUL-96

Method:608_P/P_DNS2

CAS NUMBER	COMPOUND	AMOUNT	QUALIFIERS
319846	Alpha-BHC	.01	U
58899	Lindane	.01	U
76443	Heptachlor	.01	U
309002	Aldrin	.01	U
1024573	Heptachlor Epoxide	.01	U
959988	Endosulfan I	.01	U
60571	Dieldrin	.02	U
72208	Endrin	.02	U
3312659	Endosulfan II	.02	U
50293	p,p'-DDT	.02	U
72-43-5	Methoxychlor	.1	U
319857	Beta-BHC	.01	U
419868	Delta-BHC	.01	U
103-74-2	Gamma-Chlordane	.01	U
5103-71-9	Alpha-Chlordane	.01	U
72559	p,p'-DDE	.02	U
72548	p,p'-DDD	.02	U
7421934	Endrin Aldehyde	.02	U
1031278	Endosulfan Sulfate	.02	U
53494-70-5	Endrin Ketone	.02	U
57-74-9	Chlordane, Technical	.2	U
8001352	Toxaphene	1	U
1104-28-2	Aroclor 1221	.2	U
11141165	Aroclor 1232	.2	U
53469219	Aroclor 1242	.2	U
12674-11-2	Aroclor 1016	.2	U
12672296	Aroclor 1248	.2	U
11097691	Aroclor 1254	.25	
11096825	Aroclor 1260	.2	U

Analyzed by: W. J. Wynn /Lockheed/ESAT

Team Leader: W. J. Wynn



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

AUG 06 1996

Date:

Subject: Review of Region 5 Data for Banner Western Code:ZZ

From: Charles T. Elly, Director *Chuck Elly*
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Banner Western Code:ZZ

CRL request number 960123

for analyses for ICP

Results are reported for sample designations: 96IE26S01, 96IE26D01, 96IE26S03 and 96IE26R01

Results Status:

- Acceptable for Use
- Data Qualified, but Acceptable for use
- Data Unacceptable for Use

(x) Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal.

Comments on Data Quality by Reviewer

The second instrument check standard was between 5% and 10% high for cobalt, iron, magnesium and nickel. The matrix spike recoveries were within the $100 \pm 15\%$ criteria for all elements, so these deviations from the CRL's $\pm 5\%$ criteria are not significant. The field duplicates 96IE26S01 and 96IE26D01 are not similar, and upon visual inspection, 96IE26D01 has more particulate matter on the bottom. The samples exhibited strong sulfide odors.

Comments by Laboratory Director or Quality Control Coordinator

RECEIVED

AUG 08 1996

IEPA/DLPC

Review Record for Banner Western Code:ZZ

John V. Morris 5 Aug 96
Peer Task Monitor Review and Date () Reviewed () Unreviewed

John V. Morris 5 Aug 96
Team Leader and Date () Reviewed () Unreviewed

Chuck Elly 8/5/96
QC Coordinator and Date () Reviewed () Unreviewed
(position vacant)

Sylvia Griffin AUG 06 1996
Data Management Coordinator and Date Received

Date Transmitted AUG 06 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 26-JULY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: BOB CASPER
LABORATORY: ESAT

SAMPLE FACILITY:

SAMPLE BATCH ID: 960123
ACCOUNT NO: TFA301
BANNER WESTERN

SAMPLE: 96IE26S01 FIELD: 96IE26S01

COLLECTED: 10-JULY-96 RECEIVED: 11-JULY-96 ANALYZED: 25-JULY-96

COMPOUND	AMOUNT	(Units)
Aluminum	95.8	(ug/L)
Barium	77.5	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	69900	(ug/L)
Chromium	10 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	185	(ug/L)
Iron	909	(ug/L)
Magnesium	37100	(ug/L)
Manganese	108	(ug/L)
Nickel	20 U	(ug/L)
Potassium	11200	(ug/L)
Silver	6 U	(ug/L)
Sodium	80800	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY: SD

7-30-96

JUN
5 Aug 96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 26-JULY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: BOB CASPER
LABORATORY: ESAT

SAMPLE BATCH ID: 960123
ACCOUNT NO: TFA301
BANNER WESTERN

SAMPLE: 96IE26D01 FIELD: 96IE26D01

COLLECTED: 10-JULY-96 RECEIVED: 11-JULY-96 ANALYZED: 25-JULY-96

COMPOUND	AMOUNT	(Units)
Aluminum	80 U	(ug/L)
Barium	65.9	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	50800	(ug/L)
Chromium	10 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	238	(ug/L)
Iron	284	(ug/L)
Magnesium	27100	(ug/L)
Manganese	42.7	(ug/L)
Nickel	20 U	(ug/L)
Potassium	13200	(ug/L)
Silver	6 U	(ug/L)
Sodium	99300	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY:

[Signature]

7-30-96

*JM
5 Aug 96*

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 26-JULY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: BOB CASPER
LABORATORY: ESAT

SAMPLE FACILITY:

SAMPLE BATCH ID: 960123
ACCOUNT NO: TFA301
BANNER WESTERN

SAMPLE: 96IE26S03 FIELD: 96IE26S03

COLLECTED: 10-JULY-96 RECEIVED: 11-JULY-96 ANALYZED: 25-JULY-96

COMPOUND	AMOUNT	(Units)
Aluminum	80 U	(ug/L)
Barium	28.4	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	86900	(ug/L)
Chromium	13.4	(ug/L)
Cobalt	6 U	(ug/L)
Copper	68	(ug/L)
Iron	245	(ug/L)
Magnesium	47500	(ug/L)
Manganese	26.5	(ug/L)
Nickel	20 U	(ug/L)
Potassium	5000 U	(ug/L)
Silver	6 U	(ug/L)
Sodium	40600	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	867	(ug/L)

ANALYZED BY: SPH

7-30-96

1/27/96

EPA CRL - REGION V
FINAL RESULTS REPORT
REPORT PRODUCED ON: 26-JULY-96

SAMPLE ORGANIZATION: IEPA
SAMPLE REQUESTOR: BOB CASPER
LABORATORY: ESAT

SAMPLE FACILITY:

SAMPLE BATCH ID: 960123
ACCOUNT NO: TFA301
BANNER WESTERN

SAMPLE: 96IE26R01

FIELD: 96IE26R01

COLLECTED: 10-JULY-96

RECEIVED: 11-JULY-96 ANALYZED: 25-JULY-96

COMPOUND	AMOUNT	(Units)
Aluminum	80 U	(ug/L)
Barium	6 U	(ug/L)
Beryllium	1 U	(ug/L)
Calcium	500 U	(ug/L)
Chromium	10 U	(ug/L)
Cobalt	6 U	(ug/L)
Copper	6 U	(ug/L)
Iron	80 U	(ug/L)
Magnesium	100 U	(ug/L)
Manganese	5 U	(ug/L)
Nickel	20 U	(ug/L)
Potassium	5000 U	(ug/L)
Silver	6 U	(ug/L)
Sodium	1000 U	(ug/L)
Vanadium	5 U	(ug/L)
Zinc	40 U	(ug/L)

ANALYZED BY:

QD 7-30-96 *JVM*
Aug 96



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: AUG 06 1996

Subject: Review of Region 5 Data for Banner Western Code:ZZ

From: Charles T. Elly, Director
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Banner Western Code:ZZ

CRL request number 960123

for analyses for Antimony, Arsenic, Cadmium, Lead, Selenium and Thallium

Results are reported for sample designations: 96IE26S01, 96IE26D01, 96IE26S03 and 96IE26R01

Results Status:

- Acceptable for Use
- Data Qualified, but Acceptable for use
- Data Unacceptable for Use

(x) Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal.

Comments on Data Quality by Reviewer

All quality control measures were met. The field duplicates 96IE26S01 and 96IE26D01 are not similar, and upon visual inspection, 96IE26D01 has more particulate matter on the bottom. The samples exhibited strong sulfide odors.

Comments by Laboratory Director or Quality Control Coordinator

RECEIVED

AUG 08 1996

IEPA/DLJ

Review Record for Banner Western Code:ZZ

Jol V. Moore 5 Aug 96
Peer Task Monitor Review and Date () Reviewed () Unreviewed

Jol V. Moore 5 Aug 96
Team Leader and Date () Reviewed () Unreviewed

Chuck E. May 8/15/96
QC Coordinator and Date () Reviewed () Unreviewed
(position vacant)

Sylvia Griffin AUG 06 1996
Data Management Coordinator and Date Received

Date Transmitted AUG 06 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

FINAL SAMPLE REPORT FOR GFAA/FIAS (WATER)
DATA SET 960123
BANNER WESTERN
($\mu\text{g/L}$)

SAMPLE 96IE26	As RESULT	Cd RESULT	Pb RESULT	Sb RESULT	Se RESULT	Tl RESULT
S01	2	0.2 U	6	1 U	2 U	2 U
D01	2 U	0.2 U	2 U	1 U	2 U	2 U
S03	2 U	0.2	2 U	1 U	2 U	2 U
R01	2 U	0.2 U	2 U	1 U	2 U	2 U
ANALYST / DATE	B. Yuen 7-26-96	B. Yuen 7-26-96	B. Yuen 7-26-96	as. Lapp 7-30-96	B. Yuen 7-26-96	B. Yuen 7-26-96

J.W.
Aug 96



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: AUG 06 1996

Subject: Review of Region 5 Data for Banner Western Code:ZZ

From: Charles T. Elly, Director
Region 5 Central Regional Laboratory

To: IEPA

Attached are the results for Banner Western Code:ZZ

CRL request number 960123

for analyses for Mercury

Results are reported for sample designations: 96IE26S01, 96IE26D01, 96IE26S03 and 96IE26R01

Results Status:

- Acceptable for Use
- Data Qualified, but Acceptable for use
- Data Unacceptable for Use

Sewer Disposal Criteria Met; Exceptions: Acid preserved samples must be neutralized prior to disposal.

Comments on Data Quality by Reviewer

These samples were analyzed using the FIAS-200 flow-injection atomic absorption method. All quality control measures were met.

Comments by Laboratory Director or Quality Control Coordinator

RECEIVED

AUG 09 1996

IEPA/DLPC

Review Record for Banner Western Code:ZZ

Dolores Moon 6 Aug 96
Peer/Task Monitor Review and Date () Reviewed () Unreviewed

Dolores Moon 6 Aug 96
Team Leader and Date () Reviewed () Unreviewed

Chuck Elly 8/6/96
QC Coordinator and Date () Reviewed () Unreviewed
(position vacant)

Sylvia Griffin AUG 06 1996
Data Management Coordinator and Date Received

Date Transmitted AUG 06 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

Method Number: 3114B*
Date Generated: July 25, 1996
TDF Number: 5104-039

Site Name: Banner Western (Joliet IL)
Charge Number(S): ESE-51-125
Work Assignment Number: 05-96-0-04

Hg NARRATIVE for Data Set 960123

Four water samples (96IE26S01, D01, S03 and R01) were submitted for the analysis of total mercury by cold vapor FIAS AA. The samples were collected on 07-10-96 and were received by the CRL properly preserved on 07-11-96. All samples were part of data set 960123.

All samples and standards were digested following standard CRL cold vapor FIAS AA digestion protocols for waters on 07-24-96. The hold time for mercury is 28 days. All samples were analyzed on 07-24-96, within the 28 day hold time for mercury.

A spiked blank, used as a laboratory control sample (LCS), was digested and analyzed with the set of samples. Analytical results were stored in .DAT file HGMK0724.DAT.

Mercury

Data File HGMK0724.DAT

All samples were analyzed without incident.

All QC were within the specified control limits of the SOP.

All mercury data are acceptable.

Narrative by: M.Lapp ESAT
Date: 7-25-96

FINAL SAMPLE REPORT FOR CN AND Hg
DATA SET 960123
BANNER WESTERN
(ug/L)

SAMPLE	CN RESULT REPORTED	Hg RESULT REPORTED
96IE26S01	8 U	0.2 U
96IE26D01	8 U	0.2 U
96IE26S03	8 U	0.2 U
96IE26R01	8 U	0.2 U
ANALYST / DATE	m. knapp 7-26-96	m. knapp 7-24-96

*mm
6 Aug 96*



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CENTRAL REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: AUG 12 1996

RECEIVED

AUG 14 1996

IEPA/DLPC

Subject: Review of Region 5 Data for **BANNER WESTERN**

From: Charles T. Elly, Director
Region 5 Central Regional Laboratory

Chuck Elly

To: IEPA

Attached are the results for **BANNER WESTERN**
CRL request number 960123
for analyses for Cyanide.

Results are reported for sample designations: 96IE26S01, 96IE26D01, 96IE26S03, and 96IE26R01.

Results Status:

- (X) Acceptable for Use:
() Data Qualified, but Acceptable for use:
() Data Unacceptable for Use:
() Sewer Disposal Criteria Met;

Cyanide: Portions of all of the above samples which were collected and submitted for cyanide analyses are preserved with sodium hydroxide reagents. All the samples should be neutralized prior to disposal down the drain provided that the concentrations of other analytes are less than the laboratory detection or other controlling limits. Cyanide concentration in those samples are below the laboratory detection limit.

Comments on Data Quality by Reviewer:

All the water samples submitted for cyanide analysis were assayed and the results are attached. Required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the limits. The results are acceptable for use.

Comments on Sample Results:

All the cyanide results were found to be below the laboratory detection limit. The limit is 0.008 mg/L (8 µg/L). Those samples are considered to be safe with respect to Cyanide.

Comments by Laboratory Director or Quality Control Coordinator:

Francis A. Awanya

8/7/96

Reviewer/Task Monitor and Date

Reviewed Unreviewed

John Jones
Team Leader and Date

8/7/96

Reviewed Unreviewed

Chuck Ellis
QC Coordinator and Date

8/9/96

Reviewed Unreviewed

Sylvia Griffin
Data Management Coordinator and Date Received

AUG 12 1996

Date Transmitted

AUG 12 1996

Please sign and date this form below and return it with any comments to:

Sylvia Griffin
Data Management Coordinator
Region 5 Central Regional Laboratory
SL - 10C

Received by and Date

Comments:

FINAL SAMPLE REPORT FOR CN AND Hg
DATA SET 960123
BANNER WESTERN
(ug/L)

SAMPLE	CN RESULT REPORTED	Hg RESULT REPORTED
96IE26S01	8 U	0.2 U
96IE26D01	8 U	0.2 U
96IE26S03	8 U	0.2 U
96IE26R01	8 U	0.2 U
ANALYST / DATE	<i>m. knapp</i> 7-26-96	<i>m. knapp</i> 7-24-96